Gleanings in Bee Culture

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September, 1952

Established 1873 Vol. 80, No. 9.

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Subscription Rates: United States, Canada, Pan-American countries, and Spain, one year, $2.00; two years for $3.50; three years for $5.00. Single copy, 20c. Other countries, 50c per year additional for postage. Discontinuance: Subscription stopped on expiration. No subscriber will be run into debt by us for this journal. Change of Address: Give your old address as well as the new and write the name to which the journal has heretofore been addressed. Remittance should be sent by post office money order, bank draft, express money order, or check. Contributions to Gleanings columns solicted; stamps should be enclosed to insure return of manuscript to author if not printed. Advertising Rates: Advertising rates and conditions, will be sent on request. Results from advertising in this journal are remarkably satisfactory. Advertisers' Reliability: While the publishers do not guarantee advertisements in this journal, they use utmost diligence to establish in advance the reliability of every advertiser using space in this journal.

Entered as second class matter at Post Office at Medina, Ohio. Published monthly. Opinions expressed by the writers in these columns are not necessarily the opinions of the editors.

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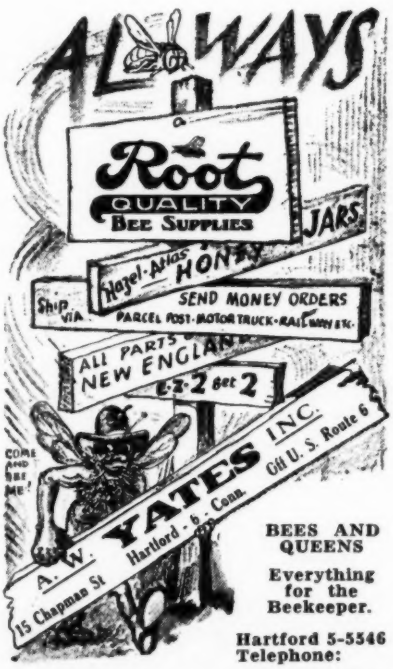

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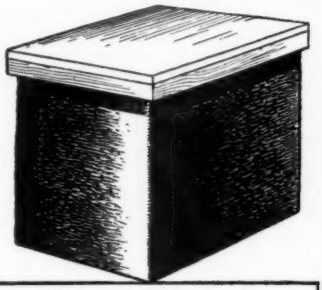

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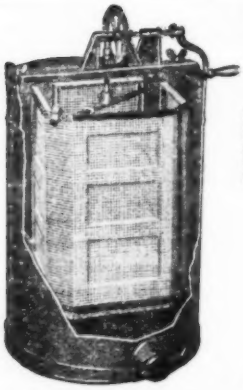

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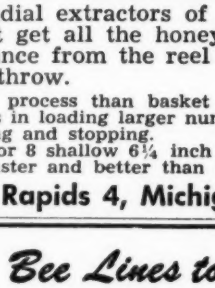
Bee Lines to The Editor



"What 'Smoky Joe Hives Again' says about swarm control is good. I have put a super between the two brood boxes for a long time. It works. But I put the queen excluder in the trash pile. It does no harm there. Then the queen, if she is in the lower brood box, can go into the empty super, and the bees are kept busy at home. That trash pile is a good place for all queen excluders. I have raised lots of bulk comb honey without it."—H. A. F.

(Continued on page 573)

HONEY POTS

Be a honey-pot collector. Ideal for a gift or to be used on your own table. Looks like the old fashioned beehive with bees enameled on lid and body. Price, $2.90; add 25c west of the Mississippi.

Carlton E. Slater, 17 Bronson Ave.
Larchmont, N. Y.

Monthly Honey Report

September 20, 1952

The following figures represent an expression of current prices from beekeepers and honey packers over the country. They are based on several reports from each state averaged with the reports in the region. Where insufficient information is returned, prices have been omitted from the chart. Where three figures appear on the chart the first figure represents the low, the middle figure represents the average, and the third figure the high price in cents per pound. Where only two figures are used the low and high are shown.

	North Atlantic	South	North Central	Mid-west	Pacific
Bulk Honey:					
Table Grade	12-13½c	10¼-14-18c	12-12½-14c	11½-12-12½c	11-11 1/2c
Industrial Grade		8½-11-14	9½-10¾-15	9½-10½-11 1/2	8¾-10 1/2
Price to Grocers:					
5 lb. jar - can	18-23-26	18-21½-28	16-18-22	16-26	16½-20
3 lb. jar - 12's	20-25½-27½	20-25-30	18-23-25		
2 lb. jar - 12's		20 24-30	19-22-25	15-22-27	23-24
1 lb. jar - 24's	25-28½-30	22-25-30	20-25-29	23-25	
Comb Honey: Cs. of 24 Sec.	$9-11	$6-6.96-7.40	$7.20-8.70-10	$8.40-9.50	
Retail Price:					
60 lb. can	15-20½-30	14-19-26	15-17½-22	15-16¾-19	14-15-20
5 lb. jar	20-29-45	25-28-37	20-24-27	20-21-23	21-22-23
3 lb. jar	25-33-45	23-32-36	22-27-30		
2 lb. jar	30-38-48	25-32-37	25-30-33	23-29-34	28-30-31
1 lb. jar	35-39-50	30-35-40	27-32-35	30-33-43	30-32
Honey Sales:	Fair	Fair	Fair to Slow	Fair	Fair
Estimated Crop: Conditions based on normal %	70	68	70	96	112
Beeswax	40-60c	41-52c	41-47	42-52	41

Bulk honey prices are lining up with Government Support Prices (see page 329 June Gleanings for details of Price Support). Bottled honey shows slightly stronger prices. A few comments are as follows:

Ohio - "Poor crop white honey. Honey dark in Southern Ohio."

North Dakota - "Market stronger. Chain stores up 3c on 2 lb. jars."

Minnesota - "Recent rains have revived Dutch clover and good crop is in view."

Kansas - "Worse drought since 1934. Lots of bees will need feed."

Iowa - "No definite sales reported. Prices are steady to a little stronger."

The general commodity price as reported in the Journal of Commerce for some 30 commodities stands at 292.5 as compared with 290 a month ago. 1938 is figured at 100.

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To Our Customers and Friends:

We mourn the death of Clifford F. Muth, Sr., President of The Fred. W. Muth Company. He passed away July 18, 1952, following a long illness. For forty years his energy has been devoted to the beekeepers and their problems. From the hundreds of letters of sympathy from the beekeepers over the country we know his passing will be felt deeply throughout the industry as the loss of a friend and a business associate.

His son, Clifford F. Muth, succeeds him as President and is the fourth generation to head the company. Cliff has been with the company since his return from World War II, where he served as a bomber pilot in the 8th Air Force. For the last four years he has been active in the business as the 1st Vice President. His initiation in beekeeping came at the age of five. At the county and state fairs he demonstrated the gentleness of colonies of bees produced by ultraviolet treated queens by handling the bees without gloves or veil.

E. L. Fisher, former county bee inspector and large commercial honey producer, continues as Vice President and is in charge of plant production. With "Bud's" extensive knowledge of beekeeping and honey production problems he watches the quality of our beekeeping equipment and production so that only the finest is sold under The Fred. W. Muth Company label.

E. A. Fleckenstein continues as Vice President in charge of sales. "ED" came to the company three years ago with a wealth of experience in sales and merchandising. His job has been to find markets for your honey crop so that we can buy your honey and pay you the top market prices. Readily available markets mean money in your pockets. As soon as your honey is weighed in, your check for the full value of the crop is in the mail. There is no waiting.

Mrs. Elizabeth Muth who has been with the Company since 1949 continues in her efficient role of Secretary-Treasurer.

While the name of Muth has been associated with progress in the beekeeping industry for ninety-four years, we thought you, who have not had the opportunity to visit us at Cincinnati, would like to meet the people who have been and will continue to serve you throughout the coming years.

To the beekeepers and honey producers of the nation we extend our pledge of devotion to our long established policies of dependability, fairness, and service of the highest quality. Whether you are looking for a dependable and profitable market for your honey or for the finest quality of bee supplies, we stand ready to serve you.

Sincerely,

The Fred. W. Muth Co.

Clifford F. Muth . . . . . President
Everard L. Fisher . . . . . Vice Pres.
Edward A. Fleckenstein Vice Pres.
Elizabeth B. Muth . . . . . Sec.-Treas.

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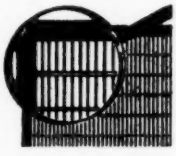

The only worthwhile Queen Excluder on the market

- **Allows maximum bee passage**
- **Better ventilation**
- **More honey production**
- **No wood. No Burr combs**
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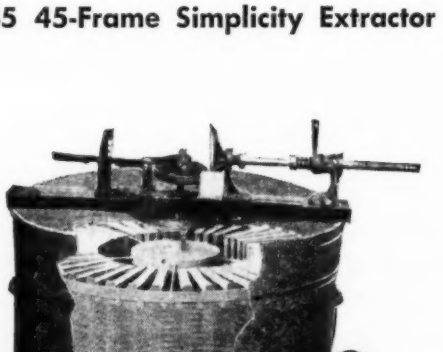


The A. I. Root Co., Medina, Ohio

Gleanings in Bee Culture

Created to help beekeepers succeed

Let's Talk Sales

Window Selling

By Charles W. Gouget, Glen Ellyn, Ill.

BUZIE BEEMAN SAYS:

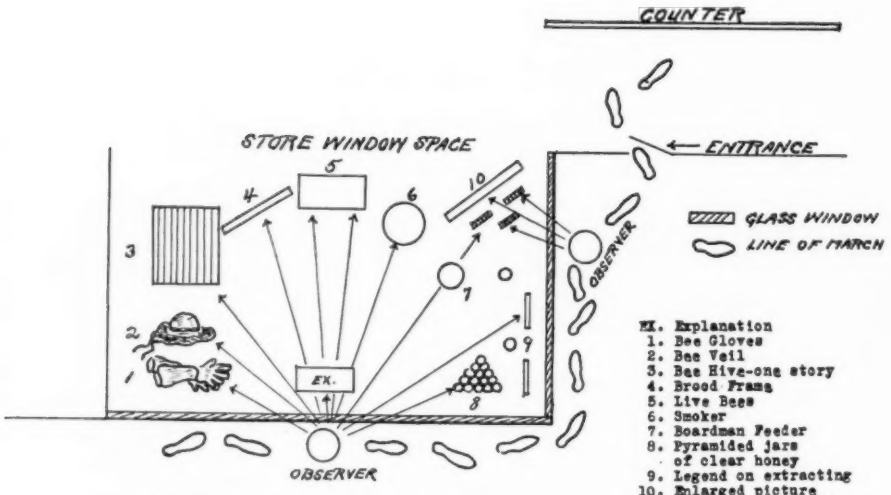
Among all the articles on a grocer's shelves, perhaps few will lend themselves to window selling as honey. Few things will attract the attention of passing shoppers more than a demonstration frame or two of real live bees. People will stand spell-bound and watch bees at work on the comb, but to sell honey the exhibit must have the proper setting. It is too much to expect that an exhibit of live bees will emphasize honey with a background of nothing but soap chips. The bees, it is true, will attract attention to the window, but the thing that will remain fixed in the mind of the observer when he enters the store, if he does, will be the display of soap chips, and he may have no idea of honey at all because no prepared honey was actually present in the display. Such a display will have little value in selling honey unless it is arranged properly among the honey products we wish to sell in the store.

Orderly Displays

Clean orderly displays attract attention because they are pleasing to the eye. Dirty, shiftless, haphazard arrangements may also attract plenty of attention, but they may defeat the whole purpose of the exhibit by "driving" the people away from the store instead of into it. Obviously, the purpose of most window displays is to get people into the store with the image of the thing illustrated so well fixed in their minds that there will be a desire to purchase the articles shown. Granted, therefore, that the exhibit is a good one, the extent to which it will succeed will depend on how many people stop, look, and study it.

Old shop-worn hives and equipment should never be used for window displays, not only because they are usually repulsive to look at, but also because they will convey the idea of lack of sanitation in handling honey products. All equipment should be clean and new, including brood frames and drawn comb. Capped honey too, should be white, clean, and dry, free from

XUM



A SUGGESTED ARRANGEMENT FOR A CORNER WINDOW DISPLAY

weepy cells and discolorations. The same ideas apply to the honey in jars, honey spread, or honey candy. Jars containing honey should be attractively arranged and they should be sparkling clean. The whole display should have a "professional" appearance.

Display Arrangement

In general, the arrangement of materials in a window should carry the eye and interest from the focal point of interest, i. e., the demonstration frames of live bees to the door of the store, since the idea of the exhibit is to get people into the store with a desire to purchase honey. The theme to be emphasized, of course, is honey, so a large neat display of clear honey in sparkling jars should be pyramided on the side of the window space nearest the door. Attention will tend to shift from the animated bee exhibit to the honey and back to the bees again fixing the idea that bees produced the honey. It is well to remember that the most attention is attracted to a display by quantities of material pyramided upon itself. A few "lonesome" bottles of honey scattered here and there around the window space may be lost altogether by the observer although the total number may be the same.

On the side window space, if there is one, leading to the door there can be a neat, illustrated legend of the extraction of honey from the comb. The steps in extraction can be numbered 1, 2, etc., leading in the direction of the door, with enough space between each legend to exhibit more honey products. This arrangement will vary with the type of window used. At each step in the legend the observer's eyes will shift from the legend to the honey, as he wonders how such a clear, attractive product could possibly be obtained from the honeycomb he saw in the window. At the end of the legend series there should be an enlarged photograph portraying the final steps in packing the honey products before they are shipped or sent to the grocer. The picture should show the products being handled by clean young women with white aprons and head gear, and sun shining in large windows. White counters, etc., will help to produce a general atmosphere of sanitation. If honey candy is available a large group of honey candies, attractively boxed, should surround the enlarged photograph.

At this point the observer will be near the door with his saliva and gastric juices flowing so freely that he decides to take a box of candy home to his wife. He enters the store and obtains the candy but he comes out with a jar of honey and a jar of honey-spread to boot. Obviously, the window display was a success. It's like Buzie says: "Sales are not produced by luck or by fairies; you have to do something about them."

Moving Hives of Bees

Here is How it is Done in California

By J. E. Eckert, University of California, at Davis

Fig. 1.—Truck load of bees covered with lumite cloth as a protection to highway traffic and to enable day time travel. Hives not screened.

If one desires to keep bees on a commercial scale in California, or to engage in the rental of bees for pollination purposes, or to take advantage of the opportunities for better beekeeping locations due to seasonal variations in floral conditions, then it will be necessary to become familiar with some of the problems of moving hives and heavy supers of honey on our public highways. The fundamental problems involved are much the same everywhere.

In some sections of the country, beekeepers use trucks with side racks and end gates to hold the equipment. In other sections, hives and supers are loaded on flat beds and are tied on with ropes to keep every hive or super in place and to prevent any bouncing or movement in transit. The flatbed method, without any sideboards or end gates, is used almost universally in California.

Standard equipment is highly desirable in order to make tight, uniform loads. When bottom boards are nailed to the lower body, one need not stoop so low to lift the hive, especially if cleats are nailed near the top across the ends of each hive body. Few beekeepers in California use inner covers or telescoped covers and two-inch cleats under the ends of the bottom board are quite common. With uniform tops, bottoms, and hive bodies, one can make a tight load that will not shift or move under the normal stresses and strains of hauling when each tier is tied down securely and fastened with sound rope tightened with the "sheepshank" knot.

No Entrance or Top Screens Used

Experience has shown that with good equipment and careful management, hives of bees can be moved over our highways without top or entrance screens and without an appreciable loss of bees or danger to motorists. The hives are loaded just before nightfall and trucked to the new location before daybreak. The careful beekeeper will avoid going through the main thoroughfares of cities whenever possible and will carry enough fuel to avoid stops at service stations.

Fig. 2.—Mechanical hoist, side view, fastened down ready for travel.

The hives may be unloaded at night or the beekeeper may rest until daybreak before unloading in order to give the bees a chance to "cool off" and for greater safety to the operator.

To assure maximum safety to other people and to permit travel on the highway during the daytime, many beekeepers are securing plastic screen covers to fit the entire load of hives. This cloth is sold as "lumite" cloth and is quite durable so that it can be used for several years if given proper care. It is not too expensive when one considers the convenience and safety it assures the beekeeper, gas station attendants, and the general public.

Most beekeepers in California load their hives with the entrances facing backwards but some turn the entrances into the wind and a few load with the hives crosswise of the truckbed. In the latter case, the hives on the outside tiers are placed with their entrances inward and facing the entrances of the hives in the second tiers from the outside. Those who use this method state that the four-inch space between the tiers of hives provides better ventilation and keeps the bees quieter than the other two methods. Only four hives can be placed across the truckbed by this method while six are loaded across the bed by the other two methods, requiring a two-inch extension over the width of the bed. Hives should **never** be loaded with the entrances facing the outside of the load unless they are tightly screened. Very few beekeepers in California fasten

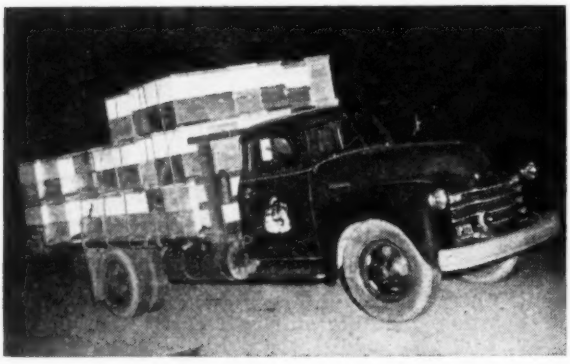


Fig. 3.—A snug load of 94 two-story hives at the end of a trip, tied on California style.

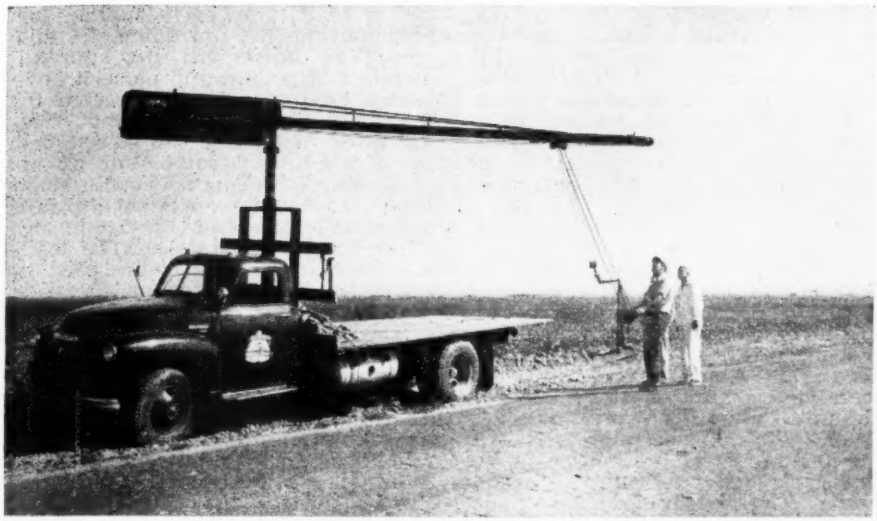


Fig. 4.—Dan Aten demonstrates how he can control the electrical lift by push buttons mounted on the fork drive. The boom is raised and ready for operation.

the hive parts together before loading, depending entirely on a tight load and securely roping the hives down. The lids may be nailed on or left as fastened down by the bees.

Mechanical Hoists

The increasing use of pesticides and the need for the movement of heavy hives on short notice, together with the scarcity of experienced help and the desire of taking the "backache" out of beekeeping, are hastening the development of mechanical hoists for the loading and unloading of the hives and heavy supers of honey. Some of these

Fig. 5.—Rear view of the hive fork push-button controls, and triangular brace to minimize vibration, and to securely fasten the unit in place.

hoists are operated mechanically by the use of pulleys, others use the power of the engine, while still others have individual electric power units which do all of the lifting. A description of the various principles used in the different types should result in the perfection of types which are improvements over the units now in use.

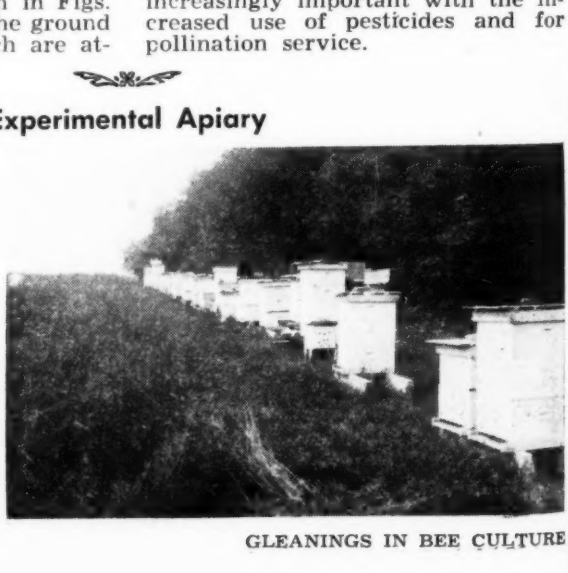
The unit shown in Figures 2, 4, and 5 was developed by members of the Valley Pollination Service of Orange, California, with the aid of Maricopa Farms, alfalfa seed producers in Kern County, California. It is the result of the ideas of Chas. Reed, Dan Aten, mechanical engineers, and a number of beekeepers. The unit shown is powered by a 2½ H. P. electric generator and two one-half horse motors housed in the box suspended over the cab of the truck. The weight of this box acts as a counterpoise to the 17 ft. boom, and both are welded separately to the central section of the operating pipe. When not in use, the unit is securely fastened to the truckbed as indicated in Figures 2 and 5. It takes but a few minutes to remove fastenings at the back to raise the upper section of the pipe and to start up the generator. Dan Aten, of Hemet, California, is shown operating the unit. He raises the upper units with the pressure of the gas in his Butane tank through a valve connected by copper tubing to an aircell in the bottom standpipe. Otherwise, an additional air compressor would be required.

The loading fork, shown in Figs. 4 and 5, is operated from the ground by the push buttons which are attached to it. Power is applied for four movements, up, down, in, and out. The hoist will lift approximately 500 pounds and place it anywhere on the truck as directed by the operator from the ground. The operation of loading can be speeded up if one hive is set on top of another and both loaded at the same time. The boom can be swung in a complete circle and lift from any point within that range. The loading fork illustrated is designed to fit under cleats nailed on the ends of the hives.

The 2500 W. light plant enables the operator to load or unload at night as the lights swing with the boom, completely lighting the entire operation. The unit does not require any additional support for the truckbed during the operation of loading or unloading.

The hoist is made to withstand the shock of travel as well as the useful work of lifting and placing the hives. The unit illustrated weighs around 1,500 pounds and costs approximately $2,250. It is not cheap but since it dispenses with the services of a helper in loading hives and supers, and can be used in the apiary to lift supers of honey in the examination of brood chambers, those who have used it are well pleased with the investment. Both Dan Aten and Chas. Reed have found it useful in moving hives on a moment's notice, without first having to remove the honey supers, and without the aid of a helper. The ability to move quickly is becoming increasingly important with the increased use of pesticides and for pollination service.

Experimental Apiary



One of the six apiaries at State College, Pa., where experiments are carried on by Dr. E. J. Anderson. The apiaries are also used for practical bee demonstrations during the Beekeeping Short Course held each summer.

The Effect of Sunlight on Hives

By A. W. Furbank, Darien, Connecticut

An editorial in the January 1952 issue of Gleanings stated that, in consequence of some experience with clothing and some temperature readings taken in the interior of apples, it was considered in certain quarters that red is a good color to use for paint for the outside of beehives. The only comment given on this opinion was a sort of editorial sigh: "Perhaps we should pay more attention to scientific facts".

What are the facts? Here are some of them, with comments as to their application. Paragraphs have been numbered, to make reference easier, regardless of whether they are facts or comments.

(1) In the item above it is reported that "red parts tend to become less heated in sunshine"; by "red parts" is meant the patches of color on an apple. This behavior is understandable if it be recognized that an apple is made up of translucent material, and it might well be that the fruit-stuff inside would be cooler at the point where it was shaded by the opacity of a patch of reddened skin than it would be where the sun's rays came through with little interruption. It is not the accuracy of these temperature measurements that is questioned, of course, but the applicability of the data obtained to the painting of hives most certainly is challenged.

(2) It has been known for a very great number of years that there is nothing that will "soak up" so much of the heat-producing rays of direct sunshine as a body with a dull black surface.

(3) It is also firmly established that nothing **reflects** those rays so well as a brilliantly polished metal surface; the better the rays are reflected, the less will be the tendency for temperature to rise. Polished metal surfaces are not very convenient things for every-day use, so when we want to repel as much radiant heat as possible we use the next best thing, which is a white surface. Nothing soaks up so **little** of the sun's heat rays (with the exception just mentioned) as a white surface.

(4) So here we have the two extremes; when exposed to the sun's rays, dull black surfaces heat up the most, and white surfaces the least.

(5) Sometimes the simplicity of these two fundamentals is veiled by practical considerations. In the matter of clothing, for example, the use of a fairly loosely-woven material may be necessary in order to permit some air circulation; if the material is white, the sun's rays will **penetrate** to a considerable extent, often with undesirable effects. Having the material colored will lessen this penetration, and there will be less internal reflection between the fibers. In the tropics, therefore, it is common practice to have a white surface to repel the first impact of the heat rays, with a material colored perhaps green or red immediately below it.

(6) Some care has to be used in applying the fundamentals of radiation and absorption to the little problems of every-day life. Last year there was a letter to one of the bee magazines from someone who had learned that a body which absorbs heat readily will also emit it readily. This is true, but he applied it wrongly, and consequently jumped to the conclusion that a hive painted black is good for use all through the year "because in summer it emits the heat just as readily as it absorbs it". (These are not the exact words used, but they are the substance of the quotation). Those bees must have had an inferno to live in during the long sunshine hours. For an explanation in detail we have to take account of the fact that the heat exchange between two bodies at different temperatures depends on the difference between the fourth or fifth powers of those temperatures (measured from the absolute zero) rather than on the difference between the temperatures themselves. To avoid the figuring this method of explanation would involve, a couple of quotations are given below from the Refrigerating Data Book and Catalog (American Soc. of Refrig. Engineers), 1937-8 Edition:-

(7) Referring to the heat emitted from warm bodies and surfaces this authority says (page 90): **"For low temperature (70°F) radiation, color**

is not at all significant". This should dispose of the argument that black-painted hives lose their heat any more readily than do the ordinary white ones. The quotation continues: **"Only for radiation from high temperature sources such as the sun or other incandescent bodies does the color of the absorbing surfaces have any effect".**

(8) On page 274 of the same source, attention is given to the protection of insulated refrigerating railroad cars from the blazing heat they are subjected to for many hours a day. **"Neglect of radiation phenomena is common. One of the most obvious cases is the use of anything but white paint for a refrigerator car".** This is a very "hard-boiled" piece of testimony, and should definitely rule out the use of red paint. The result of using "anything but white paint" is measurable in loss of the refrigerating effect produced by elaborate and expensive machinery — a dollars-and-cents affair.

(9) The next three paragraphs are based on an experience of beekeeping which is now entering only its fifth year; they should be ignored if for that reason they are considered valueless. They are presented here with the hope that they may at any rate be the occasion for some interesting discussion.

(10) For wintering, it seems a practical idea to paint one side of the hive — the south side, facing the low winter sun — a dull black. The result of doing this has been found to be a much readier response on the part of the bees to midday sunshine (by reforming the cluster because of the extra warmth); cleansing flights are very usual, and when the sun is bright and clear it is often found that unwanted material (such as dead bees) is energetically carried outside. This has often been noticed when the thermometer reading is very close to freezing; under these conditions it will generally cause the utmost surprise when friends are first asked to lay their hand against the dull black surface of the hive body that has been facing the winter sun.

The angle which the hive top presents to the low winter sun is so oblique that it has never seemed worth while to use dull black paint on it for winter purposes. It is possible, however, that a test might prove otherwise.

(11) The tar-paper commonly used for enclosing hives in winter is probably as good an absorbent of the sun's rays as you are likely to meet anywhere. The only objection to its use seems to be the fact that with the air space which exists between it and the hive body there is not likely to be a very good transference of its warmth through the wood. A better plan seems to be the use of insulating board on the west, north, and east sides, with the bare wood of the hive body, painted black, on the south side.

(12) This dull black side should be shielded from the sun some time in May (in these latitudes); a sheet of metal or insulating board painted white can be screwed on to cover it, or of course it can be painted the same as the rest of the hive.

(13) Any collection of notes on using the sun's rays for heating purposes would be incomplete if the solar wax extractor were omitted. This is ". . . a valuable piece of equipment. The sun or solar extractor is merely a black box containing a black iron tray with receptacle for the melted wax, and covered with a tightly fitting glass top. Enough heat is generated to melt the wax. To get the best results the outfit should be tilted at an angle facing the sun. If two pieces of glass are used the efficiency is increased". (ABC & XYZ of Bee Culture, 1947). The use of the glass does very much more than merely stop the escape of the heated air. Glass possesses the power to transmit **very completely** the rays of the sun which are visible to the human eye, but it is opaque to the long heat rays below the red of the spectrum. and to the ultra violet rays on the opposite side of the visible spectrum. The visible radiations enter the glass cover and heat the contents of the extractor. But the very long heat rays which result from this cannot escape; the glass is opaque to them. This explains the surprisingly high temperatures obtained.

(14) It may be pointed out that the same trapping of the very long heat waves cast back by the contents of the box is also accomplished by the window sash over the so-called "cold-frame". But in this case a large part of the heat inside the glass is employed in generating steam from the water in the dark, moist soil. Much of this vapor con-

denses on the glass cover, and drops back again in the form of water onto the soil, only to be heated up and vaporized again. This cycle of events, continuous as long as the sun is shining and there is enough water under the glass, is effective in preventing such a high temperature rise as that obtained in the solar wax extractor.

It should be added that the insulating effect of a clean metallic surface (resulting in large part from its powers of reflection) is far and away greater than that of any painted surface. The usual aluminum outer hive cover is **almost** the best possible means of protection from the summer sun; (the best of all possible tops would be one covered with a freshly polished sheet of silver!). The metal should not be painted, of course, and if it can be rubbed occasionally with steel wool, its insulating properties, already excellent, will be slightly increased still more. (This matter of the insulating power of aluminum is sometimes one of great confusion, especially if an engineering handbook is consulted for the heat conductivity of the various metals. When we speak of the direct thermal conductivity of a metal we are not concerned with its reflecting power, but only with the readiness with which heat flows inside the mass of the metal itself — the way in which heat is conducted to the handle of a poker when the other end is in the fire). Aluminum is a very good conductor of heat—more than three times as good as iron or steel. A very convincing demonstration of this is to try to drink really hot coffee out of an aluminum cup; the lesson is not easily forgotten. The power of this metal to act as a barrier to the passage of heat must therefore be regarded solely as a surface effect; when used in the form of three c r u m p l e d sheets of foil — a common method of insulation for refrigerators—this surface effect is repeated six times.

The following experiment by Hechler and Queer is briefly described in the reference already cited, where two sets of temperature readings are shown plotted as curves on a diagram. A plain thermometer arranged on a white surface is exposed to the sun's rays; by the time 50 minutes have elapsed, the temperature of the surface has risen to 90°F. Alongside, there is another thermometer "arranged so that it can absorb light, and shielded against the loss of heat so acquired"; in the same space of time the temperature this one reaches is 131°F. (The temperature of the surroundings is 74°F.; the arrangement "so that it can absorb light" would mean that the bulb is given a dull black surface). This 40° temperature difference after a period of only 50 minutes is certainly a strong piece of evidence for the use of white as protection against solar radiation.

First Prize at Ottawa Exhibition in 1950

12,000 samples of honey given away.—Photo by K. D. Henderson, Carlton Place, Ottawa.

Beekeeping in Norway in Olden Times

By Capt. Th. Thommessen, Horten, Norway

Heavy snows and wind create strange pictures.

Capt. Thommessen found the following text in an old book (1810) which was translated for him by a seamen's chaplain, Rev. Chr. Bruun. The text seemed so apt for his article that Capt. Thommessen decided to use it as a motto. "So merciful is the God allmighty towards man that almost every living creature must contribute to his preservation and joy."

Beekeeping was very common throughout Central Europe during the Middle Ages when it was of much greater importance than now-a-days.

For in those times when there was no sugar, honey was the only sweet-stuff fit for use. Beeswax was an important article and a necessity for the churches. Mead made of honey has always been a much appreciated drink.

From the old written sources we learn that the Vikings brought home from their raids to southern countries both honey and wax as well as mead and honeycakes. All those things, however, had to be "imported", and so had the "qeens" (i. e. the prettiest foreign women they could get hold of). And those "qeens" apparently did thrive very well up here, and so do the real queen-bees we import now.

From Central Europe the bees came to Denmark, then to southern Sweden, and at last to Norway. Unfortunately, I have found no sure sources of information about beekeeping in Norway from that first time, so we do not know how long bees have been kept here, but from old books on beekeeping it may be stated that bees have lived and been kept here for almost 300 years. At first clergymen especially and other government officials often kept bees on the official residences and also carried out some experimenting on a small scale. At all events they studied the life of the bees with great interest and often came to amazingly correct conclusions.

With the exception of these officials, however, there were no ordinary bee-farms of any importance, only small apiaries were run on farms in the flat districts of south-eastern Norway and in the districts down along the Skagerrak (south-east) coastline where the conditions of living for the bees were the best.

On the whole, beekeeping in Norway may therefore be called relatively new, a fact that certainly has been a "blessing in disguise" for when the movable frame and bee culture in modern hives came to the Norwegian beekeeping world, the beekeepers had no difficulty in

changing over and no prejudices in adopting the new material and the new methods. And though we may call it a new industry (with modern appliances) in fact, apiculture in Norway was more advanced about the year 1800 than we now can think possible with the old material.

It is not my intention to go too much into details because such details certainly are too well-known to beekeepers, but only a few interesting facts from old books.

Skeps Common a Century Ago

We must then bear in mind that only a hundred years ago bees were kept exclusively in skeps in the house or farm apiaries, throughout Europe. Neither the movable frame, nor the extractor, was invented at that time, and neither wax foundation, bee escapes, nor other utensils typical for modern apiculture.

But it would be an error to believe that supers or "magazines" were unknown. Such supers, however, were usually placed under the ordinary skep or brood chamber, the round top form of the skep making any other placing too difficult.

The ordinary method or procedure to get the honey crop consisted of killing the bees with sulphur or any other combustibles. Then the honeycombs were cut out of the skeps, put in a linen bag and pressed out. Afterwards the wax was pressed out in a similar manner.

Already in 1810, however, an author in a treatise gives instructions how to get the honey without killing the bees and the above mentioned "supers" was a means to that purpose.

And happily that cruel procedure of sulphuring the bees disappeared when the movable frames came in use.

But these things are already well known. Less known may be the "forest beekeeping" which was practiced extensively in certain parts of Central Europe. It consisted in hollowing out a cave for the bees in living trees, six to eight yards above the ground. Especially big pine trees were chosen. The height of the hollowing was about one yard. If the tree hollowing had a too strong smell of resin the hollowing was rubbed with leaves and blossoms of wild Thyme or wild Melisse (**Nepeta Cataria**) before a swarm was put in.

Such "forest apiaries" did really give much bigger crops than ordinary farm apiaries and this method of beekeeping may have been practiced also here in Scandinavia. That has passed into oblivion, and nobody can tell.

A float used at the county fair recently.—Sent by E. T. McHenry, Germantown, Tenn.

XUM

Smoker Fuel

By M. H. Stricker, Annandale, N. J.

What can you say about anything as prosaic as smoker fuel? It is just a substance that you cram into your smoker and hope it will burn without irritating your eyes and nose too much when the wind blows it toward you instead of toward the bees for whom it was originally intended.

In the back of your mind you're also conscious of something you have heard or read about certain fuels irritating the bees causing them to sting rather than to act subdued as the books say they should after being smoked.

In 20 years of beekeeping, or perhaps bees keeping me would be a better description, I have met this type of critter, but their cantankerousness always continued when I went back armed with another fuel. After another severe stinging, I would decide the trouble was simply unjudicious selection of grandparents when that particular stock was selected. Sure enough, the remedy in every case was a simple pinch of the head of the queen heading the offending colony.

To find the queen in such a vicious colony was always difficult and if I were forced to select one of the many fuels I have tried as being superior for shock purpose, I'd probably pick partially dried alfalfa hay for subduing colonies. Unfortunately it is a seasonal fuel. It soon becomes too dry, giving the hot flame of other grasses, and it is not too quick to fill your smoker with this material unless you spend time cutting it and prepackaging in smoke-cut bundles.

My experience with smoker fuels embraces everything from scraps of rubberoid and chicken feathers (both included in my smoker by practical joker co-workers) to dried lavender and chinese moss (both presented by advocates who swore they were the best fuels obtainable). Of the four, I found they all gave dense smoke, made the bees quite workable, but none had any more virtue than more common types of fuel. It might be, however, good warning to prospective "trier-outers" that the heated smoker did boil asphalt out of the rubberoid, ruined a good pair of trousers and also burned some perfectly good leg flesh. Ask the beekeeper his favorite fuel and you get an answer but ask him which fuel is the worst and he'll immediately wax vehement.

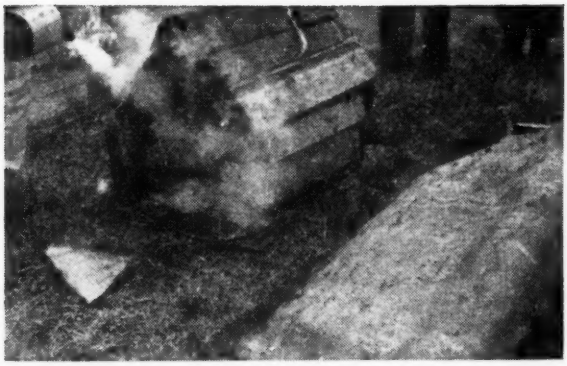
In the past few years I've made a fetish of trying those fuels I've read or heard about. Since then I've tried so many that I can't remember the number. I've tried those that were praised and those that were condemned. Strangely, many times those condemned by one were highly recommended by another beeman.

Those most objectionable I've found were too hard on the beekeeper and though many were condemned as being harmful to the bees, I found I could still work bees while using them. These I found to be: greasy rags or cotton waste (cotton products burn with an acrid smoke, anyway), discarded oil filter cartridges, and mouse stained burlap.

Another group which burned too quickly or too hot and necessitated wetting or the inclusion of green leaves to make for more efficiency, were dried leaves, dried grasses, straw, and excelsior.

Speaking of leaves, I am reminded of being awakened at midnight one night. A man had driven from another state since he had heard that I was collecting smoker fuel and wanted to offer me his favorite. I thanked him and marvelled at his product. He presented me five smoker size bundles of dried and baled sassafras leaves. His apparatus had been a metal cylinder slightly smaller than the barrel of a smoker. He had lined it with string, bolted it to a solid surface, pressed the leaves in with a homemade ramrod, tied them with the exposed ends of the string, unbolted the arrangement, and presto, he had the neatest smoker-wad you had ever seen.

I thanked the gentleman, promised I'd test them and report. My report commended his ingenuity, but I was sorry that the sassafras didn't seem to work any more miracles than other dried leaves. He responded rather grouchily, saying that my reasons were prejudiced because he in his enthusiasm had interrupted my sleep. I decided then and there that it was discreet never



Ample smoke helps greatly in transferring bees.

to condemn a man's religion, politics, or his smoker fuel.

Another gentleman swore by dried manure, but his friends who had tried the substance always thought his reason was the stir he liked to make when in mixed bee meetings he would recommend cow chips, slurring the word to see the gentler sex gasp as they imagined what he was going to say.

A fuel once forced on me when working in the cranberry area was dried cranberry vines. They give ample smoke with a not objectionable smell, ignite and burn readily. After awhile the natural oil they contain will begin to blaze and green leaves will have to be introduced to cause the smoldering that gives workability to the smoke you are squirting in your bees' eyes.

In this same area "pine barren" beekeepers use pine needles and these offer a good smoke, not objectionable to the nose and eyes and readily available. Dried needles found on the ground are usually used, but the green needles stripped from the live "bull" pine are quite usable.

North Jersey beekeepers swear by "sumac bobs" and collect them in the fall for future smoker fuel. When thoroughly dry, they may be stored without danger of spontaneous combustion and give a long lasting smoke that is often times referred to as the best "bee controller" there is. The oily residue left by sumac fuel is probably more easily cleaned from a smoker than any of the others. The heavy char left by burlap, corncobs, and some other fuels are a distinct disadvantage.

Personally, I prefer hardwood planer shavings. They burn long, and are about the easiest fuel to fill a smoker with. And, if you have a workshop close by, you'll find they are worth trying. From my own point of view, I find them faster to gather than sumac and I'd rather have the sumac "bobs" return to earth where they can grow more sumac, a very dependable honey yielder in this State.

Some smoker fuels can be stubborn to ignite, and there seem to be many methods, such as newspaper, wax paper, and excelsior. I prefer cotton waste. Shred a small piece of this, start it blazing and drop it into the smoker. Pump the bellows a few times and introduce your fuel. You'll find that even damp fuel will ignite and burn steadily.

A smoker fuel is no better than the smoker it is used in, so an occasional cleaning inside and out is good. Perhaps best of all is the usual system. Place the old smoker carefully on a shelf and promise yourself that you will clean it thoroughly when you get time, then "unship" a new smoker and you're all set for bee work with almost any kind of fuel.

This Month's Cover

The attractive honey house nestling in the green hills of Vermont was built by the owner himself, in 1948. The picture of the bee gathering nectar is executed in attractive colors and was painted this year, also by the owner, who is Clyde N. Wood of South Woodstock, Vt. Mr. Wood has been prominent for many years in Vermont beekeeping circles because of his many first prizes for comb honey. Mr. Wood uses his honey house for extracting and sales and winters his bees in the cellar. — From Martin N. Ralph, South Woodstock, Vt.

Selling Honey at the Roadside

How the Roadside Honey Stand Can be Made Profitable

By M. J. Deyell, Medina, Ohio

Before any product can be sold to advantage, whether it be pins, threshing machines, or elephants, the salesman must do four things: study the product, study the market, find the selling points, and reach the market.

Studying the Product—The salesman must know what honey is, where it comes from, how it is produced, what kind of a food it is (whether it is fat, carbohydrate or protein) and its food value and healthfulness, as compared with other sweets; whether it is a necessity or a luxury; the nature of the demand; and many other pertinent facts.

Studying the Market—He should know who are the consumers, whether men, women or children, the rich or the poor; the size or the limitation of the market and the buying season; how roadside consumers buy honey, whether in large or small packages, in tin or glass containers; the buying habits, whether the roadside market is likely to grow or shrink; the problem of competition, and other points.

Finding the Selling Points—The things that can be said or written about an article that will help the customer make up his mind to buy are called selling points. It is obvious that selling points are found as a result of a careful study of the product and the market. What, then, can be said or written about honey that will help customers make up their minds to buy?

There are a number of appeals, but one of the strongest is the healthfulness of honey. We all buy foods that will benefit us. The selfish motive in buying must be appealed to. There are many selling points that can be developed and used to advantage, in order to build up and maintain a good volume of sales.

One of the pamphlets entitled "Honey", put out by the American Honey Institute, Madison, Wisconsin, contains some excellent selling points. The nutritional statements in this pamphlet have been found acceptable to the Council on Foods and Nutrition of the American Medical Association. This pamphlet and other valuable printed matter on honey, including recipes and honey display cards, may be obtained from the Institute at a very nominal cost.

George Kirkpatrick, Kalkaska, Michigan, has sold honey for many years. He is 93 years of age and going strong.

Reaching the Market—The next step to be considered in reaching the market of roadside selling is a good location. The merchant in the town or city picks a good site for his store, where many people pass by; so the roadside honey seller must be located on a well traveled road. A corner or intersection of a road, a bend in a road, near a gasoline station if possible, where autos have to slow down a bit, are good places to establish honey-selling stands. The dwelling house, gas station, or wherever the honey is being sold, should be well kept up, and should look spick and span.

Location and Character of Signs

It is quite necessary to have at least one attractive honey sign, with the word "Honey" in large letters.

It is an advantage to have some suitable appeal for the use of honey, where it can easily be seen. If the honey stand is located on a straight road, where automobiles travel at a high rate of speed, it is an advantage to have a sign at either side of the honey stand, to announce the stand to autoists before they get to it.

It seems to be an advantage also to have a beehive with some supers on it, well painted, to add attractiveness to the surroundings. The cover of the hive makes a good place for some sample pails of honey. A beehive seems to have the effect of helping to convince the prospective customers of the purity of the honey.

Packages Should be Attractive

Roadside honey stands should have honey for sale in both tin and glass containers. The glass shows off the honey to good advantage and makes an appeal to those who do not know much about the product. The attractiveness of honey in glass starts many new customers, who buy it in larger tin containers later. Honey in tin containers appeals to tourists on account of safety in transportation. Comb honey should be kept for sale under glass. It is an advantage to have comb-honey cartons ready to put combs into when sales are made. They are convenient and sanitary. Attractive labels for packages can easily be secured. They add greatly to the appearance of honey.

It is an advantage to have prices of the most popular packages announced on a sign, so that prospective buyers may know, without asking, whether or not the price of honey is within the range of their pocketbooks. Quite often a prospective customer, not knowing the price, will hesitate to inquire because of feeling obligated to buy, after making the inquiry.

Keeping Up the Quality

In order to build up an increasing volume of honey sales, a high standard of quality must be maintained. The color and flavor of the honey should be kept uniform so far as this is possible. Due to the differences in seasons, weather conditions and bee pasturage from year to year, it is indeed difficult if not impossible to have honey that is always uniform in flavor and in color. Honey gathered from the same locality may be different in flavor and color from year to year. During a season unfavorable for honey, the quality may be decidedly below standard quality. Honey that is off-grade, poorly ripened, or honey which may have a decidedly unpleasant flavor should be sold to bakeries. The roadside seller should buy good quality honey from some reputable beekeeper or dealer to supply his customers during poor seasons. For the benefit of those who wish to purchase dark honey as well as light, it pays to have two kinds on hand. A diversity of flavors and colors, however, add to the labor and cost of stock keeping.

Giving Customer a Taste

This is important. Quite often a taste of honey makes a sale and a steady customer. Clean sample sticks should be kept in a clean white pasteboard box with a dustproof cover. The sampling jar should at all times look clean and appetizing. It is an advantage to have some wafers to go with the samples of honey. In case of prospective customers who are a little doubtful regarding the quality or purity of the honey, it is a decided advantage to have them taste and try before they buy. This simply

(Continued on page 572)

A sign near Mr. Kirkpatrick's roadside honey stand.

Honey Way Peaches

By Mrs. Benj. Nielsen

Peaches and cream roll is festive enough for any occasion.

Peaches and cream — a palate-tickling combination! And, when honey teams up with that duo, you have a peerless trio. In fact, if the Nielsens can have peaches and honey it's no hardship to forego the cream. There's nothing better than tree-ripened peaches (or blushing, thoroughly ripened peaches) that have been skinned, sliced, and liberally coated with mild-flavored honey, then allowed to chill thoroughly before serving. By the way, honey coated peaches do not turn brown readily. The natural fruit sugars of the peaches and honey blend to produce superb flavor.

If you must go fancy and serve this luscious fruit in more intricate style, here are some recipes to help you do it.

Peaches and Cream Roll

One cup whipping cream, ¼ cup honey, 8 marshmallows, ½ cup chopped dates, ¼ cup chopped nutmeats, ¼ cup chopped maraschino cherries, 3½ cups oven-popped rice cereal, and canned, fresh, or frozen peaches.

Whip cream until stiff. Fold honey into cream. Cut marshmallows into small pieces; combine with dates, nutmeats, and cherries; fold into whipped cream mixture. Roll rice cereal into fine crumbs; add one cup of crumbs to cream mixture, stirring until thoroughly blended. Form mixture into a roll in the following manner: Sprinkle remaining crumbs evenly on a piece of waxed paper. Place cream mixture on top of crumbs and mold into a roll about three inches in diameter. Wrap with waxed paper and chill for several hours. Slice and serve, topped with honey sweetened fresh peaches and honey sweetened whipped cream. Serves 6 to 8.

Peach Betty

Two cups sliced peaches, ¼ cup honey, ¾ cup flour, 3/4 cup brown sugar, ½ cup bran flakes or corn flakes, ⅛ teaspoon nutmeg, ¼ teaspoon cinnamon, and ½ cup shortening.

Place peaches in greased baking dish, drizzle with honey and top with remaining ingredients thoroughly mixed. Bake 30 minutes in a moderately hot oven, 375 degrees F.

Honey Peach Cobbler

Two cups sliced peaches, ⅓ to ½ cup honey, 1 tablespoon lemon juice, 1 tablespoon butter, and shortcake dough.

Place peaches in baking dish; drizzle with honey and lemon juice; dot with butter. Drop dough in 6 mounds over peaches. Bake in a hot oven 450 degrees F., for 15 minutes, then in moderate oven, 350 degrees F., for 30 minutes. Serves six.

Shortcake Dough

Two cups flour, ½ teaspoon salt, 4 teaspoons baking powder, ⅓ cup shortening, 1 well beaten egg, 1 tablespoon honey, and ¾ cup milk.

Sift dry ingredients; cut in shortening until like coarse crumbs. Add combined egg, honey, and milk, stirring just until blended.

Aurora, Nebraska

Second Glances

C.M. Isaacson

Mechanical super lifters are as a rule complicated or clumsy to move around, but Mr. Bishop seems to have devised one that answers at least part of such objections (page 457). That it is light and easy to apply to the hive is very desirable, and as with any strange thing it may appear more complicated than it really is. Usage would familiarize one with its application and enable one to correct any errors made in constructing it from the diagram and description. It should be a real back saver.

The contagion of beekeeping is hard to overcome, once one has come under its influence (pg. 460). Any real beekeeper can well understand the wherefore of the phrase "He's looking at the bees", for they do have an interest that holds one through good fortune and bad. We hope Mr. Mettler gets a bumper crop again to make up for his care and expense when the flow failed to materialize in the fall.

Revision of previous ideas on AFB may be necessary, if the theories presented by L. F. Childers prove to hold considerable fact (pg. 462). His point that it is not merely a brood disease but that adult bees can be, and are, infected explains a lot that has puzzled many beekeepers, and will account for sulfathiazole's effectiveness even though it does not actually kill the bacteria in its spore form. A point to take especial note of is Mr. Childer's statement that "sulfa is just a tool and it will do permanent work when **intelligently** used (emphasis is mine). I believe that pretty well sums up the whole sulfa question—used intelligently it can be a boon; used otherwise (as I have seen) a threat to all careful beekeepers close to the careless operator.

National sales organization to sell honey is essential, says the article on page 463. There is truth in that statement—we need highly developed, over-all promotion and marketing — but I cannot agree wholly that the efforts of individual producers in selling their own honey will not help the over-all picture. Throw the millions of pounds sold thusly into the open trade channels and our problems would be increased many fold. Price cutting and poor preparation of the product for market are bad, but we need a great deal of local sales effort.

An easy-to-handle bee is always an asset, and when hardiness and honey gathering ability are also present in large measure, the strain is one to try and keep pure. It seems to be often true that development over a period of years in an isolated place—such as the Kangaroo Island mentioned by Mr. Crawford — does result in a desirable type. Natural selection is slow but certain in developing characteristics which best fit a strain for its survival and ability to thrive (pg. 464).

Line breeding, plus selection, can result in improvement of a strain of bees but the process is a slow one and subject to many halts and setbacks (page 467). But the discarding of the best stock each year (after using it for drone raising only one season) would not seem to me to be in accord with the principles of practical line breeding. I may well be wrong, but I would think Mr. Brown would have more success if he chose a superior queen or number of queens, and concentrated on these as foundation stock.

Most methods of swarm control work when conditions are right—the one described by Lloyd Hagerman is no exception (page 468). But when a honey flow is intermittent, with clear days sandwiched in between showers and cool, cloudy spells, better put on your climbing spurs! After about five years of success I often believe I have solved the swarming problem, but along comes the sixth year when nothing seems to work too well. With a long honey flow, perhaps dequeening and allowing a new queen to be raised **in the colony** is about as effective as you can devise.

Some men are outstanding in their field to such a degree that it is recognized even during their lifetime. Such a one man was Dr. E. F. Phillips (page 470). His contributions in the field of beekeeping—or should one say "apiculture"?—were so varied and of such definite value that he will certainly have a place among the "giants" of our profession—the Langstroths, Roots, Pelletts, and the like. As a scientist, and also one having knowledge

(Continued on page 561)

XUM

Live and Learn

By Propolis Pete

Woe is me. So far this year, it looks as though I am going nowhere quite rapidly. And I had so many experiments planned that I was getting myself mixed up on what, where, and when. For example, I was going to find out for sure just how much good it was to feed sugar for stimulation as the season started. Well, that's the first flop.

Last fall I was sure that my colonies had plenty of stores to last way past the time that nectar came in plentifully. So, when I started to feed dry sugar to all the colonies, I thought that I was giving them a boost. Then came the time for spring cleaning. To my absolute astonishment, I found that my dry sugar was not supplementing their stores as stimulative feeding. My dry sugar WAS their stores.

The winter of 51-52 was very mild here. I don't think that there was a week during which the bees could not fly if they wanted to, at least once. They must have been rearing brood all winter. Remember the time that I told you about the drones in January? When the almanac said that it was time to warm up and get ready for spring, it turned cold and rainy. Practically all of the fruit bloom was drowned out. Locust bloomed and a three day nor'easter fairly tore the blossoms from the trees. The mild winter, and wet spring brought about a nice lush stand of clover, but just as it was starting to yield the weather reversed itself, and turned hot and dry. And I mean hot and dry. A few short days of real old time activity, and the clover was toasted so nicely that it crackled as you walked through it.

As this is written, sumac is starting. There is plenty of room to put it in the hives, in case the bees can get something out of it. How far it will go, I don't know. A lot depends upon how much moisture is left in the ground. The farmers are irrigating like mad, but who excepting the weather man can irrigate the weeds that give me my honey.

I haven't the remotest idea of what the short crop is going to look like. The newest nectar in the cells is quite dark, and by the time it is evaporated down to honey it may be almost black. I am not sure just what it is coming from. There is an awful lot of chicory blooming in waste places. It may be from that. Also, in spite of the dry weather, there is a lot of privet bloom. The bees are on the privet, but they seem to travel a lot before they get a load. If the honey tastes anything like the flowers smell, I won't be happy. On the other hand, I have found so much privet in my travels this summer that surely other years have had quite a big percentage of privet honey, and my honey always has been very fine flavored.

I don't know why I never noticed it before. I have found many cases recently where people have planted privet and let it grow high to form windbreaks. Some of these hedges are 20 feet high and literally covered with blossoms. The sickish sweet odor is overpowering when the wind is in the wrong direction, and for myself I wouldn't want to be on the lee side of one of those whoppers.

There is still time for a honey crop, quality not being considered, but at this writing the supers are still empty. In a bad year you sure learn to appreciate having drawn combs. I have had to use a lot of foundation this year, what with building up my colonies and all, and used my drawn combs as baits in the supers. Invariably the bees are filling and sealing the drawn combs before they even look at the foundation. Then they go at it in a half-hearted way and draw them thin and cap them early. I like to use nine frames to a super, but you can't do that when drawing foundation. I don't know how your bees take it, but mine don't build good combs when there are only nine frames of foundation. One will be so bulged out that you can't handle it, and the one next to it will be dished in so that you can't uncap it.

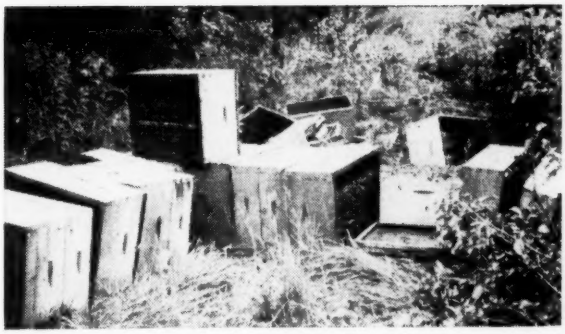
So, it looks like a short crop of dubious quality. With high hopes I have sold my crop short, and now am wondering if I am going to lose all my customers. But there is a bright side. The goldenrod and aster still looks wonderful in spite of the heat and dryness. If we get a break in the weather, I may have a better than usual fall crop. The aster honey here is tops, but the

(Continued on page 571)

High Winds Play Havoc with Hives

By Bruce Morehouse
Montevideo, Minn.

Beekeepers, like many other producers, are very much dependent upon the weather in their field operations. With good weather we harvest big crops and everything goes along smoothly. But with adverse weather comes smaller crops, extra



No. 1.

work to try to make a crop, and sometimes losses.

Adverse weather conditions are sometimes spectacular and this year we personally have had two instances already. First, with the melting snow came floods that swept away eight outdoor overwintered colonies and drowned out a few others.

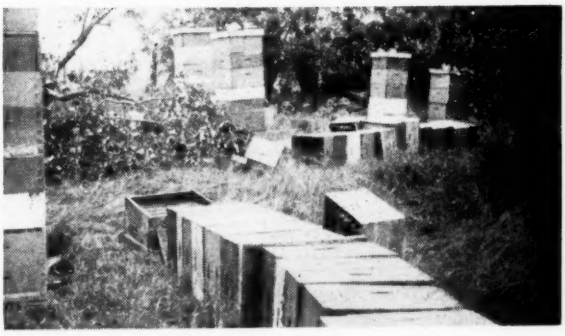
Then came a dry spell during April and May. Around the first of June we observed a codger sitting

No. 2.

on the down-town curb singing "It 'Aint a-Goin to Rain no More". It seemed that the crops were about to dry up.

Later, in June, the rains came and the earth looked green again. On June 24th a three-inch rain and nearly a hundred-mile wind moved barns, broke trees, and toppled hives. Here are some pictures of the wind damage. What a mess to straighten up!

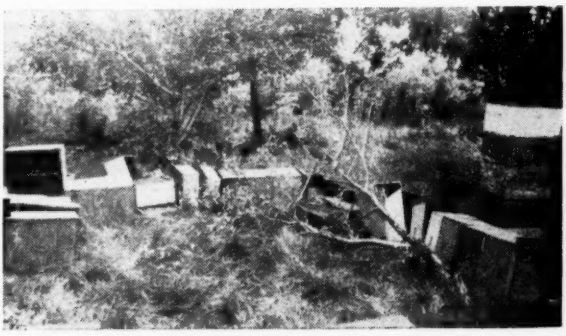
One day recently we left the



No. 3.

truck on the highway and walked into the yard—to keep from bogging down, it was so wet. A farmer nearby was plowing corn, and complained that it was "so discouraging —half my field is under water!" Just another instance of weather influence upon the ultimate outcome of a crop.

Incidentally, we believe in stacking hives high in Minnesota—it has a way of keeping us either No. 1 or No. 2 among the states in total honey production!



No. 4.

XUM

A Talk to Beginners

By M. J. Deyell

September, a Wonderful Month

When the month of September rolls around we in the North know that the end of the season is approaching and that there is not much we can do in the way of apiary management or hive manipulation, to improve conditions of colonies to go into winter quarters. In sections of the country where a fall flow occurs we can see to it that bees have ample comb space for storage of nectar and pollen, most of which is likely to be used for winter stores. More about this later on in this talk.

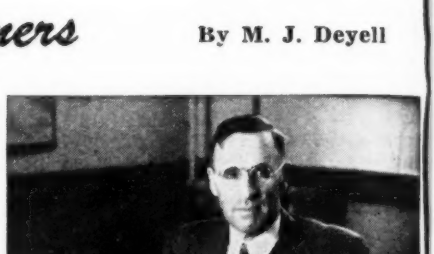
As we give our bees a thorough check to see that they have all the requirements for winter, we note a slight difference in the behavior of the bees, from what we observed earlier in the season, especially during the spring months. During this month bees are likely to be somewhat listless and it would seem that they know cooler and perhaps colder weather is near at hand, or just around the corner.

To most beekeepers, September holds a tinge of sadness because the season is drawing to a close and in a few weeks our labors will be over except for disposing of the surplus honey which, it is to be hoped, has been harvested.

In this area the honey flow has been very disappointing to date but prospects for a fall flow from aster and goldenrod are quite promising, especially if we can have some rain. During the past few weeks, I have attended meetings in Wisconsin and Michigan, and in some parts of those states beekeepers reported the rains had been so frequent and heavy that they interfered with normal nectar secretion. If, in some way, the rains could be distributed equally over all areas, beekeepers would be happier. But we can't have everything we want.

Some Things Learned from Experience

It is a case of "live and learn" with most of us. During the past weeks when I visited my apiaries I failed to put on some empty supers that were stacked up at the side of each apiary. I should have put those supers on hives of bees over inner covers with center blocks removed, to have the bees protect the



M. J. Deyell

combs from moths. A few days ago I took a look at some of these piles of supers and saw no sign of moths. Yesterday I discovered three supers with combs that had been destroyed by the moths. It is amazing how quickly moths will riddle good combs, especially if they are dark and have a small amount of pollen in the cells. It pays, then, to have supers containing drawn combs on hives of bees. During the summer if such supers are piled up in apiary houses they should be treated periodically with a chemical to keep them safe from the bee moth. We use carbon-disulphide. This is inflammable and must be used with extreme care.

Perhaps some of you have noticed adult bee moths on a comb in a hive. Usually a moth will remain perfectly quiet, as though dead, until an attempt is made to kill it. If the moth starts to run or fly, it is almost impossible to destroy it, unless one uses a fly swatter.

Carry Lighted Smokers in Metal Containers

Where one has a number of out apiaries and is traveling from one to the other, it is an advantage to plug the nozzle of the smoker with green grass in order to have the smoker ready for use at the next apiary. Roll a small amount of green grass or weeds and force it into the nozzle of the smoker from the inside. I have learned that it pays to carry this plugged smoker in a metal container having a sufficiently wide base so it does not tip

over when the car turns a corner. If it does, the smoker may be thrown to the bottom of the car or truck, the lid of the smoker may come off and empty the contents where it can easily ignite dry material. I learned my lesson regarding this matter ten years ago. I plugged the smoker and placed it on an inner telescope cover in the back seat of my car. While I was driving, the smoker tipped over and set fire to the interior of the car. I saw some smoke coming from the back of my car and when I opened the door of the luggage compartment flames leaped out in my face. I grabbed a burlap sack and attempted to put out the fire and in doing so burned both hands very severely. In fact, I was unable to do any work for 18 days. Since then I have carried a plugged smoker in a metal container.

Requeening This Month

At the Ohio summer meeting recently one of the speakers mentioned September as being a good month for requeening. Our experience has been that queens are more easily introduced during late summer and early fall than they are earlier in the season.

At one time it was our practice to requeen all colonies during early August. Some beekeepers still do this. In some instances, with this practice, perfectly good queens may be removed and killed. We have found that some two-year-old queens do as good work, perhaps better, than year-old queens. At the present time we requeen when a new queen is needed.

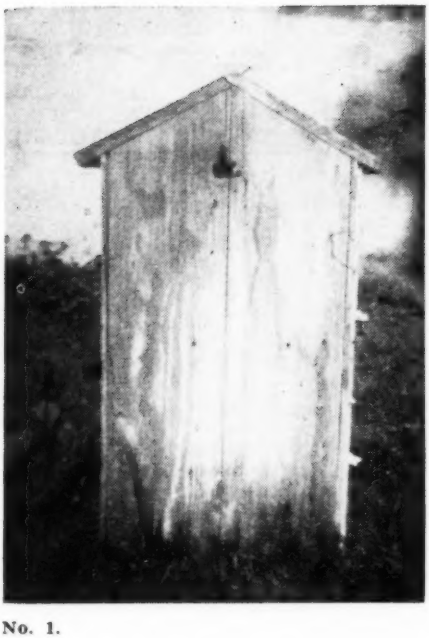
In checking through colonies during this month it is well to remove any queens that appear worn out or have served their time, replacing these with young, vigorous, laying queens. Such queens have time to produce a considerable amount of brood before winter sets in and should be in their prime next season.

Ample Winter Stores Essential

At the Ohio meeting one speaker mentioned the advisability of having an abundance of winter stores, completely sealed and well ripened honey, directly above the winter cluster. This speaker made a statement which is likely true, that an abundance of sealed honey in each hive tends to stabilize the temperature of the hive during the winter.

It is an advantage to have apiaries protected from the cold winds of winter. Hives should face south or east, so that the winter sun shines on the fronts of hives.

A Root apiary in a spot well protected from the prevailing winter winds.



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One Season's Experiences

By Marvin W. Kosanke, Ripon, Wisconsin

During the past few years I have hived swarms of bees in some very unusual places. However, this past summer I had some of the strangest experiences of all.

One day during July I received a call from a nearby village that a swarm of bees had taken up residence in a box which stood on the ground at the rear of a garage. The next day I drove over to get the bees. Upon my arrival I found that the bees had entered this wooden box through a hole that a mouse had gnawed in the rear side. (Fig. 1). This box contained an electrical switch and fuse box but was no longer in use. I closed up the entrance and took the box containing the bees home.

When I arrived home I opened the door to determine the condition of the colony. I received the greatest surprise in all of my beekeeping experiences. Not only did I find a colony of honey bees but a nest of bumblebees as well on the bottom of the box. The bumblebees had made their home in an old mouse nest (Fig. 2). Apparently they lived in complete harmony with the honey bees as they had an entrance on the lower righthand side where the wires entered the box through several augur holes while the honey bees used the small hole near the top of the box.

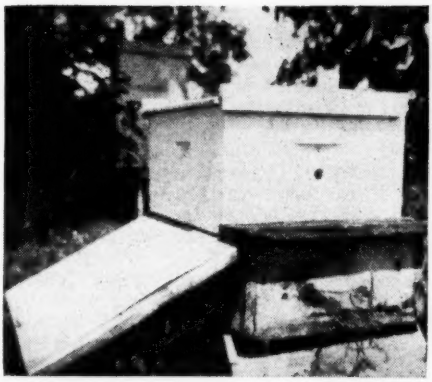
It was not difficult to transfer this colony to a hive. I removed the nest of bumblebees and then I laid the box on the ground, opened the door and set a hive body containing dark combs on it. In a week the queen was laying in the combs and practically all the bees were in the hive body as well (Fig. 3). I left the hive body on the box until all the brood had emerged from the combs in the box before I removed the hive body and set it on a permanent stand.

About two weeks prior to the time I secured the swarm in the electric switch box, I obtained three swarms from a colony in a neighbor's house as shown in Fig. 4. These swarms were fairly large and all of them emerged within ten days. A much smaller swarm also emerged during the same period but it was not large enough to hive. Each swarm settled on the same lilac bush near the house and were easily hived.

A week later another neighbor told me of a swarm of bees that had

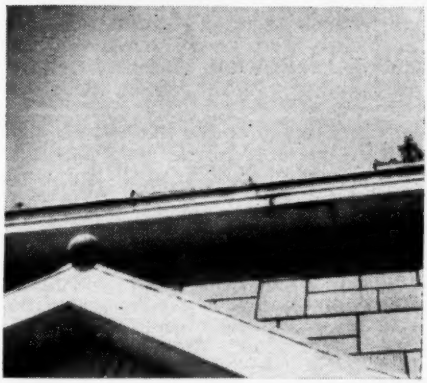
alighted in his hay field. Immediately I took a hive over to this field. Upon my arrival I found that the bees had clustered in a windrow of hay (Fig. 5). I set the hive close to the bees and gently lifting up the cluster I shook them into the hive. By sunset all of the bees had entered the hive and I was able to take them to my apiary.

The last of these unusual swarms I obtained on the 19th of August. I received a call that a swarm had settled on a fence along the side of a highway. As soon as possible I drove over to this location with a



No. 3.

hive and when I arrived I found that a very large swarm of bees had clustered on the brace post (Fig. 6). I had no trouble in hiving the swarm and when I returned in the evening the hive was completely filled with bees. This swarm was so large that when I took it to my apiary I gave it another super immediately. Although it was late in the season and the weather was unfavorable, this swarm filled their food chamber and stored a surplus of about 20 pounds of honey. I believe it must have weighed around



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10 pounds. It was one of the largest swarms I have ever seen.

In all probability it will be a long time before I shall have the opportunity of hiving swarms under such varied circumstances again. Each of them was very unusual and to have them occur in the same season makes it even more so.

No. 5.

No. 6.

Editorials

P.M.A. Launches Honey Promotion Program At the request of the American Beekeeping Federation the Department of Agriculture has begun a promotional program for honey which is to reach its peak during the month of October, emphasizing National Honey Week which was instigated by the American Honey Institute about 20 years ago.

This program is directed by G. Chester Freeman in charge of the Food Trades Division of the Food Distribution Branch of Production and Marketing Administration. There are five area offices, — in Chicago, New York, Dallas, Atlanta, and San Francisco. About 40 or 50 government employees will be working on honey promotion in Washington and in the regional and state offices of P.M.A. until the program is completed.

With a letter from O. F. Beyer, Area Field Supervisor of the Chicago Food Distribution Branch, was enclosed a copy of their progress report on Midwest Area activities in honey promotion up to August 8. This report shows that on the state level work has already been done in eight states and that twelve organizations such as Wholesale Grocers' Associations, Restaurant Associations, Dairy Associations, Retail Grocers' Associations, Beekeepers' Associations, Chambers of Commerce, and Extension Services have been contacted. At the local level contacts have been made in seven states,—Illinois, Iowa, Michigan, Minnesota, Missouri, Nebraska, and Wisconsin.

This appears to be an unusual opportunity for beekeepers and bee associations to cooperate with P.M.A. in helping to utilize the facilities of the Food Distribution Branch to increase consumer interest in honey at the point of sales level and ultimately to increase the per capita consumption of honey in U. S. A.

The per capita consumption of honey in Canada has risen recently to approximately three pounds. The per capita consumption in U.S.A. is less than two pounds. This promotion program by P.M.A. together with the splendid work of American Honey Institute should result in a greater demand for honey. Let's make **National Honey Week**, the last week in October, the best ever.

Beekeeping Has a Future A few years ago we met a beekeeper in Ontario who was decidedly "down in the mouth" about the future of beekeeping. He couldn't see any future for it—in fact, he talked as though he might get out of the bee business. He had been having some rather poor crops.

Last season when we met him again he had secured over 100 pounds per colony average from about 600 hives and the corners of his mouth were up. He is **not** going out of the bee business.

Some commercial beekeepers have had discouraging times during the past decade, due to adverse weather conditions, a change in crop rotation, and the disappearance of legumes, mainly sweet clover which was such a boon to beekeepers 10 or 15 years ago.

During the war years there was an increase in grain crops. This has been bad for beekeeping. At present the trend is back to a large grassland program. A short article appearing in the August 1952 issue of Rural Marketing entitled, "Big Grassland Program Will Skyrocket Farm Production," starts out with a quotation from the Bible, "All flesh is grass and all the goodliness thereof is as a flower of the field"—**Isiah** 40:6.

The first paragraph of this article reads as follows:

"Grass, our principal, expandable agricultural resource, is indeed a mighty important commodity and without it there would be no life. However, this nation is far behind in the matter of its growth. If ever the United States gets its grassland program in high gear, it will hit untold heights in farm production."

The article also refers to what is said to be an arresting article, "Your Greatest Opportunity Is Grass," which appears in the August 1952 issue of The Country Gentleman.

It seems obvious that our country has been driven to this grassland program which will help prevent erosion and also increase the fertility of the soil. When more grasses and clovers are grown on farms, it is plain to be seen that beekeepers will have more sources of nectar. The clovers if grown for seed will need bees for pollination.

The future of our industry appears to hold considerable promise of better days ahead for beekeepers. It can truly be said that agriculture cannot succeed without more grasses and legumes which are beneficial to the beekeeper. It can also be said that agriculture cannot succeed without bees to pollinate over 50 farm crops, consisting of legumes, vegetables, and fruits. Beekeeping is, indeed, an important branch of agriculture and does have a future.

* * * * *

Using Planes for Spotting Apiary Sites This matter of securing suitable apiary sites for bees is becoming quite a problem, especially among commercial beekeepers. It is essential, first of all, that an apiary be located in an area where there is an abundance of honey and pollen plants. Bees should have easy access to water, which means that there should be a river, creek, or pond near by.

Airplanes are being used to seek out suitable sites. When flying low, the operator can observe the flora beneath. He can easily note the difference between a wheat and clover field. When driving along the road it is not always possible to see all of the clover fields on farms.

As a matter of fact, planes are now being used by some of the large commercial beekeepers for visiting their out apiaries as well as for spotting suitable apiary sites.

This is a far cry from the old days when the beekeeper relied on old "Dobbin", hitched to a buggy or wagon, for transporting him to and from outyards.

* * * * *

Honeydew Not Suitable for Winter Stores in the North We have had quite a number of reports from several beekeepers who say that their bees have gathered quite a quantity of honeydew. Some have sent samples to us, not knowing exactly what their bees gathered.

Honeydew is usually more plentiful during a dry season. However, when nectar from natural sources is available in quantity, bees are not likely to gather honeydew.

Honeydew is a sweet glutinous liquid excreted in large quantities on the foliage of plants by plant lice and scale insects. It is also abundant on the leaves of trees and bushes and drops on the sidewalks covering them with a glistening coating resembling varnish. At times it falls in minute globules like fine rain.

Although readily gathered by bees it has an inferior flavor and is detrimental to beekeeping. The ancient Roman Naturalist, Pliny, supposed that honeydew fell from the stars and this belief was generally accepted for centuries, hence the name.

Most honeydew honeys contain less invert sugar but more sucrose or cane sugar, dextrin or gums, and ash. It is because of the larger percentage of gums and ash that it is unsuitable for winter feeding. Honeydew honey may be distinguished from floral honey by means of a polariscope. A ray of light passed through a solution of floral honey is turned or rotated to the left; passed through a solution of honeydew the ray is turned to the right.

Honeydew lacks the clarity of honey; has a peculiar taste, and has a smoky, cloudy appearance. Honeydew may be used for spring bee food but in the North it is inadvisable to use it for winter stores especially when bees are confined for long periods during the winter.

* * * * *

"The Economic Value of the Honeybee" This is the title of an article by Gilbert Perigo, Apiary Inspector of Indiana. It appeared in the May 1952 issue of Outdoor Indiana.

Mr. Perigo brings out the fact that the farmer and fruit grower receives far greater benefits from the bees than does the beekeeper. Among the many pollinating insects the honey bee is the only one that has been domesticated so that any number of hives can be placed near an orchard or clover field to render the needed pollination service.

According to Mr. Perigo, many millions of dollars have been lost by agriculturists in Indiana because of the lack of bees to bring about maximum pollination.

This is also true in other states. During the pollination conference in Tucson, Arizona, in 1950, Dr. F. E. Todd, of the University, said that there is a shortage of bees in 11 western states and that farm crops are suffering because of the lack of insects to perform the necessary

XUM

pollination for maximum crops.

Mr. Perigo mentioned the production of red clover seed and the lack of bumblebees for pollinating the blossoms. The modern scientific methods of farming have had much to do with this. Wire fences have replaced the old rail fences which furnished nesting places for bumble bees and other pollinating insects.

The following from Mr. Perigo's article is significant: "The average yield of red clover seed in Indiana for the past ten years has been less than one bushel per acre, approximately 8/10 of a bushel. It has been definitely proven that with proper cultural and pollination practices, the yield of 5 bushels per acre is entirely practical and yields of from 10 to 12 bushels per acre are possible. Our present honey bee population is entirely inadequate to care for our pollination needs."

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Extract Often to Save Supers In parts of the country where heavy honey flows occur, it is common practice to have on hand as many supers as are needed for each colony, to hold the entire crop. In some instances, four or five deep supers, or seven or eight shallow supers are needed for each colony.

This practice has become quite common in the middle west, especially in areas where the atmosphere is humid and does not permit the bees to cure the honey quickly.

Some years ago, we had a long, heavy flow from clovers in western Ohio. It seemed necessary to pile on enough supers to hold the entire crop. A few of the two-story brood chamber colonies had eight deep supers. Someone asked us why we didn't extract some of the honey instead of piling the supers so high. Our reason for not doing so was that the honey came in so rapidly the bees did not have it properly cured or ripened. If, however, we had sorted out the supers or combs that were ready to be removed in order to extract these, we might have cut down on the number of supers used.

In some parts of the West where the atmosphere is hot and dry, where bees can drive off the excess moisture and cure honey quickly, beekeepers can remove supers as soon as they are filled and before the combs are entirely capped over. These supers are extracted, then put back on the hives. This practice does save combs and at the same time makes it unnecessary to have the piles of supers so high and thus avoids so much high lifting.

Where this method is practiced there would be fewer surplus combs to keep free from the bee moth during the time the combs are not in use on the hives.

In any event, whichever method is followed, it is quite essential that bees be given ample space when needed, to control swarming and to secure the maximum crop.

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Don't Over-Manipulate Hives During the recent beekeepers' meeting in Jefferson, Ohio, one of the speakers said it is inadvisable to manipulate hives of bees too often because it interfered with the morale of colonies. Beginners are likely to examine colonies frequently to observe brood in different stages and to admire the bees and the queen. Some one has suggested that if it seems necessary for a beekeeper to go into his hives each day, that he select one of his hives for this purpose rather than molest the morale of all of his colonies.

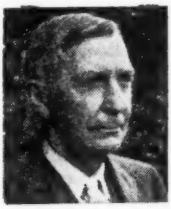
A casual look at the bees, without removing all of the combs may not do much harm to the colony. However, to take out all of the combs when a flow is on, does not do the colony any good. However, this may be necessary in producing section comb honey, especially at the beginning of a heavy honey flow, to cut out queen cells. By all means, put the combs back into the hive in the same order in which they were removed.

A statement appeared in one of the European bee journals a few years ago to the effect that a complete overhauling of the brood chamber of a colony during a good honey flow may result in the loss of a day's work in honey gathering, due to the temporary loss of colony morale.

So long as bees are working well and there is no danger of swarming, colonies should be left alone during a honey flow. When top supering is practiced, it is an easy matter to put a fresh super on top of the pile when needed, without molesting the bees.

From North, East, West, and South

SOUTHERN CALIFORNIA, Aug. 3



Weather: July was a hot month in Southern California with the temperature well over 90° nearly every day in most of the valleys. Naturally everything dried up very materially during that time. Most of the days had considerable humidity and that made it feel still warmer. Near the end of the month there were a few thunder showers in the valleys and quite hard rains in the mountains.

Condition of Plants: As we said, the lack of moisture and hot days during July finished drying up the smaller plants. The buckwheat in most places looks dry but toward the mountains appears to be in fair condition yet.

Miscellaneous: Our Gleanings article this month is being written from Idyllwild. It is a beautiful spot amidst the pines in the San Jacinto Mountains located in Riverside County. There were five days when we had some rain and thunder, with heavy showers on two of them. One day nearly an inch of rain fell. Naturally everything is very fresh and green looking, as if the trees and shrubs were really enjoying life. There are no bees in these regions to gather the nectar if there should be any in the blossoms.

We have as a guest in our mountain cabin, a lady who uses no sugar whatever but insists on having honey for all kinds of sweetening. She uses it on cereals and fruits and in her tea and coffee. It is not because of the doctor's orders but just because she feels that honey is much more healthful than sugar. If at least a portion of the people would use as much honey as this lady does, there would never be a dull moment with the honey market.

The honey supply we brought to the mountains ran out and we began looking in the stores for more. The jars we found were either too large or too small. Five pounds is too much to supply our needs and a pound or half-pound jar is too small an amount. It would seem as if all stores should be stocked with quart jars. Of course, one big drawback to the small containers is the price asked. The honey isn't a very good grade and the half-pound jar sells for 21 cents, while the pound container sells for 39 cents. This in comparison to the price to the producer is too much.

All of our readers have undoubtedly heard of the earthquakes in the San Joaquin Valley and farther south, where considerable damage was done. The particular damage that interests the beekeepers was to the water systems. Irrigation lines were damaged to some extent and cotton and alfalfa growers are concerned as to what may happen to their crops. Should those crops not blossom properly because of lack of water, then there could be quite a financial loss to both the farmers and beekeepers. Many apiaries have been moved into that area with beekeepers expecting to get good yields of honey from both the cotton and alfalfa.—L. L. Andrews, Corona, Calif.

TEXAS, August 5

Weather: Although several points over the State reported record high temperatures for July, for most of Texas the summer temperature has been moderate thus far. Certainly there was no heat wave such as occurred last year. July brought no general rainfall and the precipitation occurred largely as widely scattered showers. Several points enjoyed highly beneficial rain but most of Texas has been rather dry since May.

Bee Plants, and Honey Crop: In most areas the main honey crop has been removed from the hives. Horsemint yielded the heaviest crop of honey in three years with some producers averaging well over 100

pounds per colony. In the blackland section a good crop was obtained from marigold and later from horsemint wherever the mint plants were abundant. However, comparatively little top quality white honey has been harvested so far. Mesquite bloomed over a wide area but little honey was obtained from this source. Sweet clover produced rather sparingly except in few favored locations. Only a few localities reported any appreciable yield from vetch. Cotton, too, has been erratic in production. Wherever moisture conditions were favorable up to 35 pounds per hive were reported in central Texas. Better yields are expected in north Texas. As a whole, producers are obtaining a substantially larger honey crop than they did last year. However, with amber grades predominating, producers are finding a slower market than usual.

Market: Considerable new honey is now coming on the market. Retail prices are about the same as last year but movement is rather slow at this time. Comb honey is in short supply.

Miscellaneous: Up to the present year Texas was fortunate to be free of the vetch weevil, which pest has long prevailed in other vetch-growing areas. Recently it was found that this weevil had invaded the heart of the vetch-growing area of northeast Texas. In addition to disease and insect pests to which vetch plants are subject, the weevil by its destruction of ripening and mature seed will add materially to losses vetch growers will sustain. Strong organization among beekeepers made possible the price support program which honey now enjoys. However, success of the program depends on marketing honey in the usual channels rather than to turn the crop over to the government agency for disposal. Surely the same energy responsible for price support can definitely improve marketing conditions if beekeepers will work together through local, state, and national organizations. The Texas Beekeepers' Association will hold its annual meeting at College Station on September 29 and 30. A good attendance is expected and an excellent program will be presented. The program committee has contacted good speakers for every session. — A. H. Alex, College Station, Texas.

SASKATCHEWAN, July 31

Weather: No year is just like another and this season is only similar to last year in the surplus of rain and lack of flying weather. After the years of dry weather during the 30's, we never dreamed that we would ever complain of rain again but after two very rainy seasons, we have had enough.

Bees built up very well during the spring and were in excellent shape by mid-June. Since then only an occasional sunny day has allowed bees to fly and at this writing, there is scarcely one half a normal honey crop in the hives and as the bloom is almost finished, there is little chance of making up for lost time.

Honey Market: All our honey has been cleaned up and the market is clear for new crop honey. Prices in Western Canada have remained firm but considerable weakness has been experienced in Ontario where a surplus remains from last year's crop. Honey prices have not risen in keeping with the increase in the general price level and beekeepers are feeling the pinch. Prices will have to improve sharply or production will be seriously reduced.

Pollination: Many states are far ahead of us in the use of bees for pollination, but bees for this purpose are now being seriously considered by many growers. This season was an excellent year for the pollination of alfalfa. Bees could work for only short periods at a time but apparently, they turned out in force whenever possible, and worked alfalfa very heavily. We are hoping that this will result in good seed production as many of our alfalfa seed specialists have been very skeptical about the value of bees for pollination of this particular crop. In some years bees do not seem to be too effective unless they are on the crop in fairly heavy concentration. The difficulty, of course, is that usually a grower wishes one colony to do the job that should be assigned to at least ten.

Advertising: The Canadian Beekeepers' Council is continuing its

Canada-wide advertising campaign. This fall, the campaign will consist of strip ads in the comic section of the weekly newspapers, and as these have a circulation of about two and one half million, it gives a good weekly coverage on our fourteen million population. It is only by keeping honey continuously before the public that we can develop and keep the market which honey should rightfully have.—R. M. Pugh, Tisdale, Sask., Canada.

WYOMING, August 5

Weather: Wyoming was threatened with a severe drouth and ranchers with their high price livestock were becoming greatly alarmed over having to ship out most of their cattle and sheep. Then the unusual happened, the rainfall for July was double the normal and we have had some good showers these first five days of August, and we have had heavy dew, which is good news for the beekeeper. But we have also had some very hot days sandwiched in with drying winds at temperatures in the upper 90's.

Honey Plants: Bee pasturage seems short, perhaps for lack of snow coverage during the winter. Another factor is spraying alfalfa for weevil which has necessitated moving bees just when they were starting to work.

Bees: Colony strength is good. The dandelion flow was ample for a good build-up and some colonies stored a little surplus from dandelion.

Crop Prospects: Bees are now working well in some locations, not so good in others. The reason for it being so spotted is due to the variation in rain fall, locations near the mountains being a little more favored with the occasional showers.

Pollination: Much educational work is needed. Spraying is done by some farmers after the bloom is on and the bees working. Spraying should be done before bloom appears. Some farmers think they should be paid for the honey the beekeeper gets from their fields. I was greatly surprised to be told this by the wife of a farmer just a few days ago. I did my best to put this family straight on the matter.

Miscellaneous: If we use the popular term "bottle neck" in our industry I would say it is due to the lack of consumer interest in and demand for HONEY. Old age is said to be hastened by a lack of calcium and commercial sweets are blamed for dissipating the supply of calcium in the blood stream. I wish I had that inspiring affix Ph. D. or its equivalent with the test-tube experience to either prove or disprove such statements. Anyway, we know doctors are buying $100,000 ranches and their business is good. In many cases the simple things are the most effective, and wouldn't it be great if HONEY could be unquestionably proved a necessity for vibrant health?—Earl C. Reed, Ranchester, Wyo.

MISSISSIPPI, August 5

Weather: As a follow up of a very mild winter we have had and are still undergoing one of the most disastrous drouths in the history of our state. Extremely hot weather has prevailed throughout the summer. In fact, the first half of May brought us some record-breaking temperatures. Our drouth really began 15 months ago. The precipitation for this whole period is far below normal. Little rain fell during April and the first half of May. The last half of May gave us some moisture over most of the state. Since that time practically no rain has fallen over most of the state. The south end of the state has had rain during the past two weeks. Most of the north half of the state still has had practically no rain. Pastures and grasslands look about as desolate as in midwinter. Forage crops are a total loss. Even cotton is turning brown almost as if a frost had hit it.

Condition of Bees: In spite of the disastrous condition of vegetation, bees are in very good condition at this time. Cotton, having been able to withstand the extremely dry hot weather until recently, yielded nectar fairly well on most all types of land. Consequently most colonies have stored a very good supply of honey. There is no surplus but many of them have stored enough pollen and honey to carry them through the winter even if we have no fall honey flow. It is too early

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to tell whether there will be any fall honey flow. If rain comes soon and plenty of it some honey flow for winter stores might be possible. Where colonies did not have access to cotton little honey is left in the hive. Feeding will soon have to be resorted to if these colonies are to be saved.

The yield from clover in the south of the state was very good. In the north half of the state very little surplus was made. Clover was late starting to bloom, having been set back considerably by last summer's drouth. Heavy grazing also retarded the bloom. However, the flow started off very well and it looked like we were going to get a good crop. Suddenly the flow shut off about May 15th and it never recovered very much. By this time most colonies had stored enough to last until the cotton bloom but very few colonies had any surplus. Wherever any surplus was secured, clover or cotton, the quality was excellent.

Market: Perhaps due to the extremely hot weather the demand for honey has been slow this summer. Although there is very little locally-produced honey to sell, we expect to cooperate with the industry and with the P. M. A. folks in getting our people to use more honey this year than they ever have. We have a state Marketing Committee and they have recently met with a P. M. A. representative and made plans for promotion this fall. The Mississippi Agricultural Extension Service will assist. The Woman's Home Demonstration people have indicated their full cooperation. If we can just get the women folks to talking honey, we can get somewhere.

Pollination: The writer was pleased to be asked to speak to the Mississippi Seed Improvement Association on the subject of clover pollination. Our seed growers are interested in the subject. We know of only one beekeeper who rented bees for pollination this year. He rented several hundred colonies, mostly for pollination of clovers on grazing land. This makes the second year he has done this and he says the farmers are well pleased with the results. We believe there is going to be more and more demand from the farmers for bees for pollination. — Homer Tate, State College, Miss.

KANSAS, August 5

Weather: The early spring was backward due to cold temperatures causing plant growth to be about three weeks late. The latter part of April and first part of May the temperatures advanced to normal producing favorable conditions for plant and colony growth. Rainfall was normal for the first five months of the year. Since June 1, drought conditions have prevailed in the southern half of the state. Nearly constant high temperatures have occurred during June, July, and into August. Good rains at timely intervals occurred during June and July along the Nebraska border.

Condition of Colonies: Much spring feeding was necessary in southeastern and south central Kansas. In May, there was some swarming in colonies which had not been given sufficient room during the rapid increase in colony strength at that time. Old queens were another contributing cause to the swarming. By June 1 most colonies were at peak strength.

Plants: Dandelion, redbud, and early fruit bloom all blossomed at the same time in mid-April. Later there was an abundance of yellow and white sweet clover bloom. In the northeastern part of the state there was an extensive white clover bloom. The dry, hot weather beginning in mid-June, which continued into July and August, shortened the blooming period and dried the plants. The rains which occurred during June and July in the northern tier of counties ensured a honey crop from yellow and white sweet clovers.

Honey Crop: The nectar flow was fairly good at the end of May in the southeastern and south central part of the state, but was of short duration due to the hot dry weather. In the central area, a strong nectar flow from yellow and white sweet clovers, beginning June 1, persisted for only a week. The second crop of alfalfa in the central and south central areas began to bloom early, about July 1. In general, the honey crop in southeastern and south

central areas is a failure. The northcentral area near the Nebraska border is in the midst of harvesting an excellent honey crop from white sweet clover.

Because of the honey crop failure in the southern part of the state several beekeepers have made alfalfa pollination contracts. One Texas beekeeper has made alfalfa pollination contracts for the use of 1,000 colonies in two southwestern counties in Kansas.

Miscellaneous: The annual meeting of the Kansas State Beekeepers' Association is to be held Sunday, September 7, at the High School in Altoona, Kansas. A program of this meeting is published elsewhere in this issue of Gleanings. Plan to attend and know what the Association is accomplishing and help make the Association plans for the forthcoming year.—R. L. Parker, Dept. Ent., K.S.C., Manhattan, Kans.

OKLAHOMA, August 1

Weather: January started the year off with 1.08 inches of rain. May topped all the months with 8.36 inches. Total rainfall above normal, our 10-year average being 33.22. July came in hot and there seems to be no break for summer heat in sight. The heat wave has shoved temperatures to 100-103 degrees in Duncan for the last 10 days. Farmers and beekeepers are hoping for rain, as hot winds are endangering crops and pastures. Southeastern section of Stephens County around Loco, Oklahoma is especially hard hit by the dry weather.

Honey: Six weeks of drouth during the period when clovers were expected to be in bloom has hurt the honey flow. Colonies may have secured enough to live on, but have no surplus. Prospects are also uncertain for a fall flow, and the drouth may have damaged the clover seedlings to such an extent that next year's supply of clover plants will be hurt. A good flow was in progress from irrigated alfalfa fields in the extreme western part of the State, but these favored locations were few. Cotton has not yet been damaged seriously by the dry weather and while the bloom has started to open the outcome from this source is questionable. One beekeeper in the southwestern corner of the State reports the loss of 75 percent of the bees in 200 hives that were in one field of alfalfa. The field was sprayed with aldrin by airplane around 5 or 6 A. M. Workers, sealed brood, and drones were killed, but not all of the queens. This was reported by U.S.D.A.

My best hives did 165 pounds each this year. Apiaries properly cared for have produced a fair to good size crop of honey. Honey buyers were bidding for the better grades of table honey, but were showing little interest in dark and strong flavored offerings.

Plants: Throughout most of Oklahoma where spring rains were plentiful, wild flowers bloomed well. Supplies of pollen and nectar were plentiful. A large amount of spring honey was gathered. The wild persimmon did well this year. The honey is water-white in color, and has a good flavor. The early spring rains gave vetch a good send off. Sweet clover followed up and was good in this district. The black locust flow only lasted about one week, but it was good.

Miscellaneous: Our County Agent, Mr. Edward Gregory, and his Assistant, Mr. George Seales are very helpful to beekeepers. I remember last spring Ed took time out from the office to help me plant sweet clover on some terraces and diversion ditches. In June I was indeed happy to have Dr. Harvey B. Lovell and his good wife visit us. Dr. Lovell, Entomologist from the Louisville College, Louisville, Kentucky, is making a tour and a study of plants for his new book that will be out soon. He and I visited my apiary and picked up a few new plants. Then the following week another beekeeper friend, Mr. C. A. McCalister from Kansas City, Mo., came by to see me. He and I also made a visit to the apiary and he took home with him a quart of our good vetch honey to try out with hot biscuits.

Our Stephens County Beekeepers' Association hasn't had a meeting in quite some time. Some of us are making plans for our honey booth at the County Fair in September. C. F. Stiles, Extension Entomologist at the A. & M. College at Stillwater,

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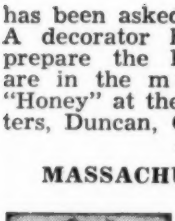
has been asked to judge the honey. A decorator has been secured to prepare the honey booth. Plans are in the making to advertise "Honey" at the fair.—V. K. McMasters, Duncan, Oklahoma.

MASSACHUSETTS, July 29



Weather: The early spring weather was not too favorable for bees, but from late April until fruit bloom they built up rapidly. The fruit bloom period was cold and rainy and most unfavorable for pollination. June was almost ideal bee weather, plenty of moisture in the soil, and excellent nectar-secreting temperature. July has been dry with the second growth clovers following haying burning up about July 15. The past week or two has been hot and dry with wide farm areas in severe drought condition.

Condition of Bees: Bees used in orchard pollination were kept for longer periods than usual, some being kept nearly three weeks. Strong colonies therefore swarmed, and many queens were injured, causing weakened colonies. Bees not rented, built up to enormous strength and stored considerable surplus honey of excellent quality but dark amber in color in most locations.

Condition of Honey Plants: Soil moisture conditions caused most excellent growth of honey plants until the first part of July. Since then the severe drought and clear, hot days have not been favorable to plant growth, except in the dairy farming sections where the heavy applications of manure to the fields enabled the soil to retain sufficient moisture to resist the drought. Swamp lands are still in excellent condition. We do not believe that the fall blooming plants such as goldenrod, and wild aster have been materially injured. However, if heavy rains do not come within the next 10 days the chances of surplus honey in September and October will be doubtful.

Honey Crop: Strong colonies properly supered and cared for have stored considerable surplus. Individual colony yields of 100 to 150 pounds is not unusual, and this is in addition to winter stores. The average yield may be considerably lower, perhaps 75 pounds. If colonies can maintain themselves during the next two months of heavy brood rearing without using up their present stores, the crop should be very good.

Miscellaneous: Milo T. Bacon, for many years an instructor in horticulture at Norfolk County Agricultural School, Walpole, Mass., has been appointed Chief Apiary Inspector for Massachusetts. Mr. Bacon has spent many summers as Deputy Apiary Inspector, and should be able to render a real service to the beekeepers of this state.

The beekeepers who have taken the proper care of their bees have had to do some pretty fast work to keep them supplied with supers. It is quite possible that many of them did not anticipate their needs in advance of the honey season. The writer found all supers in use all too soon, and had to work late at night and sometimes into the early morning hours to keep ahead of the bees. Looking back over the past two months, we wonder how we did it. Some colonies had to wait a long time for supers. Beekeepers who have not given the needed supering may find the brood nest congested to the point where it may not be possible for the bees to raise sufficient young bees to go into winter. Extracting some of the surplus, and returning the empties, would make it possible for the bees to move honey from the brood nest to make room for the queen.

We are beginning to believe that it may be more profitable to devote our colonies to the production of honey than to rent them for pollination. In the past we have not had any colonies left over our rental needs to make any favorable comparison. If we can market our honey at a favorable price, the bees that remained on their permanent stands will be the most profitable. If this is the case it would appear that we should rent our bees only to those orchardists who will use every precaution to guard the health of the bees. A customer who has used our bees for more than ten years, was sold on the idea of saving a dollar or two by renting about half his requirements from another beekeeper. We had been informed of the fact that this beekeeper had his apiaries heavily in-

fected with A.F.B. in 1951. The orchardist had not informed us as to his intentions to use outside bees, but disclosed this information when I questioned him as to his reasons for cutting down the number of colonies. We were just removing the last few colonies from the truck. We were supplying extra strong colonies in two or three bodies, and we told him that we did not dare to run any chance of infection of A.F.B., and asked him if he would assume any losses resulting from his use of bees from the other beekeeper. No, he would not be responsible — his interest was in pollination and not in the bees.

We had gone to considerable labor and had earned our rental fee, but the bees were removed before they had any chance to fly. Our interest was in the bees.

I hope New England beekeepers will not sell their honey too cheaply. Good-flavored honey should be worth at least 55 cents per pound in 1-lb. jars and $1.98 for the 5-lb. jar or pail. If you expect to remain in business under the present high costs you cannot do so by selling at much less. Sell your good honey —do not give it away.—R. E. Newell, Medway, Mass.

NEW YORK, August 9

Weather, up to this date, in Western New York has been excellent except for lack of rain. June and July were very dry. The clover that looked so promising during April and May dried up early in June resulting in no honey flow from that source. Late July and early August have brought scattered showers and good colonies are now experiencing a fair gain from second bloom alfalfa. However, many colonies had run low on stores and have not yet recovered enough to take advantage of the present flow.

Northern New York has fared much better than the western part of the state and good crops of excellent white clover honey have been secured in several of north country counties.

Honey Crop: While there is not much of a honey crop up to date, prospects seem to be excellent for a good fall flow from goldenrod and asters. Those plants are looking luxuriant and seem to be plentiful in their usual locations. Buckwheat acreage is very low which will probably result in one of the smallest crops from that source on record.

Most farm crops are very good except oats and some vegetable crops. Corn is exceptionally good. The fruit crop prospects are considerably below normal. Sour cherries were about one half of a year ago. Peaches are average. Prunes and pears and apples are about half a crop with good markets anticipated.

Honey market very closely reflects support prices. I do not know of any honey in producers' hands.—H. M. Myers, Ransomville, N. Y.

ONTARIO, August 3

Crop Prospects throughout Ontario vary considerably, about in proportion to the volume and distribution of rainfall. The latter has occurred in belts or streaks here in Central Ontario. In the area where our bees are located we have had only a few light showers since late May, while 20 to 30 miles to the north, a wide area has had regular rain all summer. Ironically, this area contains a great deal of non-agricultural land, so that the copious rainfall served only to reduce forest fire hazard, while, had a generous portion of it come our way, it would have made the difference between a fair crop and one of bumper proportions. The southwestern counties have been even harder hit by drought, and some producers will have almost complete crop failures. From central Ontario to the eastern boundary of the province the crop appears to be better and the Ottawa Valley which seems to be a favored spot, is reported to have a good crop again this year.

A news bulletin issued recently from the Ontario Beekeepers' Association places the crop at ten million pounds, just 50 percent of the 1951 yield. It further states that present prospects are for a below-normal crop in the western prov-

inces, with little carryover. While Ontario will have a carryover of probably three to four million pounds, it is of excellent quality and no difficulty is expected in marketing it.

Ontario beekeepers are fortunate in having an excellent crop and price information service. Each summer the Crop and Price Committee of the O.B.A. sends questionnaires to key men in each county, asking for crop estimates and suggested prices. These reports are studied, and a crop report and recommended wholesale and retail prices are sent to all producers in the province. While a small percentage will always cut prices, it is safe to say that these reports have been worth thousands of dollars to Ontario beekeepers through information concerning the total production, and the areas where shortages and surpluses exist. In the past these estimates have proved remarkably accurate.

Miscellaneous: Looking back over the season it may be said it was typical, because it was different, if such a contradictory expression is permissible. Or perhaps there is no such a thing as a typical season in beekeeping, because no two are alike. Our 1951-'52 winter seemed conducive to rapid depletion of stores, and many colonies were too near the starvation level for maximum early brood-rearing. Wide spread feeding had to be resorted to. Cool, cloudy, and showery weather restricted the gathering of nectar through May, and feeding had to be continued into June. Around the middle of June a heavy flow commenced from locust and we had the unique experience of having the bees forsake the syrup in the feeders for the more attractive nectar in the locust blossoms.

Clovers of all varieties, which for several years were scarce, now are staging a come-back. While on a trip to Michigan in June, 1950, and again last June, I couldn't help but note the profusion of white Dutch clover growing everywhere. But this year in our section of Ontario, Dutch clover was abundant, and the bees worked it freely. In previous years, when a sprinkling of bloom appeared in pastures only occasionally did we notice bees on it.

Similarly, sweet clover has appeared in rank growth in waste areas for two succeeding seasons. It is also finding its way into crop rotations again, and I have noticed several fields pastured this year. A sweet clover field in pasture is a valuable source of nectar, as bloom is prolonged throughout the summer.

We have a yard in a blue weed location, but as this plant grows on rocky and infertile areas, it is susceptible to drought conditions, and the lack of moisture in July dried it up rapidly. However, in that location basswood filled the gap, and gave us a fair crop.

Basswood has always been considered an uncertain source of nectar, yielding in one season out of three or four. But it seems when other sources fail the bees will gather from basswood. Authorities now tell us that bees are creatures of very fixed habits, and will continue working one source of nectar to the exclusion of others which may be available at the same time. Basswood blooms for a short period during the time when clovers are in bloom, and I am wondering if basswood is not a more consistent yielder of nectar than we imagine, only that the bees are not interested in it when they are able to secure plenteous supplies from clovers. Solitary bees, bumble bees, moths, and flies can be seen on basswood bloom practically any season, with only an occasional honey bee in evidence.

August 4: As I finish these notes heavy rain is falling which will make its effects felt in the late honey crop.—Allan T. Brown, Peterborough, Ontario.

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Stopping Swarms with a Mirror

By Bartie B. Snelson, Rolla, Mo.

In your issue of Gleanings in Bee Culture of Nov. 1949, there is an article, "Stopping a Swarm of Bees with a Mirror", by Matt Slack of Amherst, Ohio. He states that he has not had a chance to try it again, so didn't know if it was successful. I had the opportunity to try it this June. I stopped two swarms within a week, and when they alight on a limb or something else, if one will keep flashing the bright light from the mirror the bees in the air will cluster quicker. One swarm was too high in the air to throw water on them and if it hadn't been for the mirror I would have lost the swarm. I say it will work.

Local Newspaper Advertising a Big Help

By Alex Mullin, Cornwall, Ontario

Beekeepers are gradually coming around to the idea that honey has to be advertised. It is no longer possible to expect that honey will find its own market without some push behind it on the part of the men in the honey industry.

There are a number of kinds of advertising. The most important and cheapest is the word of mouth recommendation which a salesman gives a good product and which the buyer will voluntarily give if the product lives up to those claims. Honey can do that.

The second is paid advertising in newspapers, magazines, and over the radio.

The honey industry does a considerable amount of this; it could undoubtedly do more. The cost is high enough to give pause to any but the strongest company or association contemplating an advertising campaign.

There is a third form of advertising which is almost as worth while as the other two, and which is too much neglected. This comes under the heading of what industries refer to as public relations.

When a really prominent man sails on an ocean liner, the owners of the vessel see to it that he is photographed on board, and they are happy if the name of the ship appears in the news story about that man's departure.

The American Honey Institute does work like this on a national scale, sending out publicity material, recipes and so on, striving to keep honey in the public eye. This is of great value to the industry.

I have been farm editor of a small daily newspaper, the Cornwall, Ontario, Daily Standard-Freeholder, for some time, and have written a weekly column on bees for more than two years. I believe that it might be worth while to give a few pointers on how groups of beekeepers can translate publicity work to fill their own local needs.

As good a starting point as any are the meetings of the local bee association. These are news, and every paper wants news. Most editors will assign a reporter to these events, provided he knows about them in advance.

But it is often possible to go a step further. Some papers will use material prepared for them on the subject of bees and beekeeping. This sort of thing appearing in the paper from time to time is too valuable to be overlooked.

It may be hard for a local beekeepers' association to find a member willing and able to write the kind of story a paper would use. Yet it is not really difficult. The subject of bees themselves is an inexhaustible one.

If this type of work is to be undertaken, it will be well to approach the editor first, and see what kind of reception the idea gets. No newspaper will put material in its news columns which should be in the advertising columns. The criterion for deciding this point is simple: Will the story appeal to the general reader? If you can convince the editor that it will, then he is interested.

Once the job of writing a story like this is taken in hand the first thing to remember is that it has to be put up in legible form for the printer. Typewrite or have it typewritten, double space lines with a margin at top and bottom, before taking it in.

There are scores of angles in getting together a usable story. A good opening gambit might be a brief history of beekeeping in the locality. Another might be review of the importance of the bee industry as a branch of local agriculture.

A touch of imagination in the treatment of the material is worth reams of factual matter. Local names are alway good. Above all, avoid rehashing outside material. Editors can scent this sort of thing, and if they wanted it they could get it from the source.

The story must be short, not more than two or three pages long. It should treat only one subject, and it is better to be a little on the terse side than to give any sign of pointless rambling. Every word in the essay should have some bearing on the chosen subject.

Do not expect too much. Three or four stories a year, in addition to reports of meetings of the association, would be about all of this sort of feature material a newspaper would want to handle, unless it

(Continued on page 566)

Honey Survey in Oklahoma – 1952

The American Beekeeping Federation requested the Oklahoma State Marketing Board to make a survey of the consumer and retail honey trade. This survey was made in Oklahoma by a corps of workers who went into every large town and into every county seat with their questionnaires during April and May. The workers visited 2110 homes and 828 retail stores.

It is impossible to give the full report here but a few excerpts will show the extent of this survey. ___

Honey Consumer Survey

Does your family use honey?

Yes	1341	63.6%
No	769	36.4
Total	2110	

If not used, reason or reasons for not using?

Reason given	Percent
Don't care for it	20%
Never think to buy it	10
Price too high	6½
Too sweet	7
Flavor too strong	5
Doesn't agree with me	4½
Can't eat sweets	4
Other reasons	16
No reason	28

If so, what honey do you have in the house today?

Liquid	537	39.5%
Combination liquid and comb	152	11.2
Comb	33	2.4
Prepared spread	179	13.2
None	458	33.7
Total	1359	

At what meal is honey used by your family?

Breakfast	852	37.6%
Lunch	498	22.0
Supper	470	20.8
Between meals	318	14.0
Any or all times	77	3.4
No answer	50	2.2
Total	2265	

What is favorite way honey is used by your family?

As a spread	951	65.5%
Just anyway	72	5.0
In baking	70	4.8
In cooking	67	4.6
On cereals	33	2.3
As a substitute for sugar	27	1.9
As a sweet	16	1.1
As a dessert	26	1.8
On pancakes	20	1.4
On bread	17	1.2
On fruit	17	1.2
For flavoring	13	0.9
On biscuits	11	0.8
Other uses	55	3.6
No answer	56	3.9
Total	1451	

In what form does your family use honey?

Liquid	804	54.1%
Combination liquid and comb	309	20.8
Comb	71	4.8
Prepared spread	288	19.4
No answer	14	0.9
Total	1486	

How does your family usually purchase honey?

Tumbler	27	1.9%
8 oz. jar	262	18.2
1 lb. jar	374	25.9
2 lb. jar	249	17.3
5 lb. jar	51	3.5
5 lb. tin	126	8.7
Prepared spread	287	19.9
1 lb. comb	38	2.6
Others	28	2.0
Total	1442	

How often does your family purchase honey?

Twice a week	3	0.2%
Once a week	39	3.0
Once in 2 weeks	64	4.9
Once in 3 weeks	7	0.5
Once a month	294	22.3
Once in 6 weeks	11	0.8
Once in 2 months	233	17.7
Once in 3 months	213	16.1
Once in 4 months	98	7.4
Once in 5 months	1	0.1
Once in 6 months	201	15.2
Beyond 6 months or other reasons	155	11.5
Total	1319	

Preliminary Observations and Comments

It is significant that more than six families in ten reported that they use honey.

The principal reasons for not using honey can be overcome in part, at least, by consumer education and improvement of quality. These reasons are as follows:

Don't care for it	155	19.8%
Never think to buy it	77	9.8
Price is too high	52	6.6
Too sweet or rich	58	6.7
Flavor is too strong	39	5.0
Doesn't agree with me	35	4.5
Can't eat sweets	23	2.9
Use other sweets	13	1.7
Only eat it occasionally	11	1.4
No reason	217	27.7
Totals	680	86.1

The possibilities in increasing consumption of honey, as indicated above, are tremendous.

Although 33.7 percent of homes did not have honey at the time the survey was made, 37.6 percent had honey in liquid form, 13.2 percent had honey as a prepared spread, 11.2 percent as a combination of liquid and comb, and only 2.4 percent had comb honey on hand.

Although breakfast was the most common meal at which honey was used by families, lunch, supper and between-meal uses closely followed by 22.0, 20.8 and 14.0 percent, respectively.

The favorite way honey is used by Oklahoma families is as a spread inasmuch as 65.5 percent reported

this use. The next uses in line were "just anyways", in baking and in cooking which amounted to only 5 percent and less of those who reported (1451). Advertising honey as a spread, or promotional emphasis on this use, should pay good dividends.

The most common size purchased is a 1 pound jar with the 1 pound prepared spread, 8 ounce jar, and 2 pound jar following in rather close order.

It is interesting to note that consumer preference for the 5 pound tin is more than twice that for the 5 pound glass container.

It would be extremely interesting, as well as valuable to the honey industry, to see the results of a similar survey in Illinois or Ohio, New York or Pennsylvania, California and some southeastern state. This would give us a much more complete picture of the honey marketing problem.

Retail Survey on Honey —Oklahoma, 1952

In what form does your store sell honey?

Form	No.	% of ans.	% of stores selling honey
Liquid	800	37.4%	98.0%
Combination liquid & comb	716	33.5	87.7
Comb	39	1.8	4.8
Prepared Spread	585	27.3	71.7
Total answers	2140		

Of the 816 retail stores reporting that they sold honey, 499 stocked three forms of honey: liquid, combination liquid and comb, and prepared spread, or 61 percent of the retail stores which sold honey.

In what size containers?

Size	No.	% of ans.	% of stores selling honey
Tumbler	170	5.2%	20.8%
8 oz. jar	485	14.7	59.4
1 lb. jar	800	14.2	98.0
2 lb. jar	725	22.0	87.6
5 lb. jar	223	6.8	27.3
5 lb. tin	250	7.6	30.6
1 lb. spread	549	16.6	67.3
Comb	40	1.2	4.9
Servers	47	1.4	5.8
4 oz. jar	11	0.3	1.3
3 lb. jar	8	0.2	1.0
Total answers	3308		

What size containers do customers generally prefer?

Size	No.	% of answers
8 ounce	78	9.7%
1 pound	408	50.8
1 lb. spread	16	2.0
2 pound	165	20.5
1 lb. and 2 lb.	48	6.0
5 pound	22	2.7
8 oz. and 1 lb.	15	1.9
8 oz. and 2 lb.	9	1.1
8 oz. and 5 lb.	9	1.1
1 lb. and 5 lb.	13	1.6
All sizes	6	0.7
Don't know	10	1.2
Servers 1 lb.	2	0.2
3 pound	2	0.2
Total answers	803	

What size containers do your customers generally prefer? (Continued)

A combination of the reported sizes gives the following tabulation:

Size	No.	% of ans.
8 ounce	117	12.9%
1 pound	504	55.7
2 pound	228	25.2
5 pound	46	5.1
Don't know	10	1.1
Total answers	905	

What is your general source of supply?

Jobbers & packers	725	87.6%
Producers	9	1.1
Both	82	9.9
Don't sell honey	12	1.4
Total	828	

It is significant that 812 out of 828 retail stores surveyed, or 98.6 percent of the total, sold honey and stocked it in their stores; that 87.6 percent bought honey from jobbers and packers while only 1.1 percent bought direct from producers and only 9.9 percent bought both from producers and jobbers and packers.

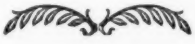
It is likewise significant that of the retail stores selling honey 98.0 percent sold it in liquid form; 87.7 in combination liquid and comb; 71.7 percent sold a prepared spread, and only 4.8 were selling comb honey.

The sizes of containers stocked are in order of importance:

1 pound jar	98.0%
2 pound jar	87.6
1 lb. spread	67.3
8 ounce jar	59.4
5 pound tin	30.6
5 pound jar	27.3
Tumbler	20.8

Five pound tin containers are more generally stocked than 5-pound glass jars.

From the main opinions expressed by operators of retail stores it seems that, if the other principal things were done to improve consumption of honey, advertising by the industry on a national scale would not be necessary to move the honey crop. This does not refer to brand advertising in any way which should be encouraged at all times. If the seller of honey can induce the store operator to display a lot of honey in several kinds and sizes, help him with displays, furnish him with recipes and promotional material, and service the store regularly, there should be no honey marketing problem in most instances.



Highlights of Ohio Meeting Held in Jefferson

Ross Milner, County Agent of Ashtabula County, is not only interested in, but in close touch with beekeeping in the county. He pointed out that Ashtabula County is deficient in lime, and since lime is needed for alfalfa, red clover, ladino, and other legumes, liming the soil is now a part of the modern program.

The present yield of red clover seed per acre is only .83 bushel. He was very emphatic in saying that bees will increase the yield of seed from four to five times.

The dairymen and beekeepers have been meeting together for they have much in common. The dairymen need the legumes and the beekeepers furnish the bees for cross pollinating legume blossoms.

H. R. Swisher, of Springfield, Ohio, a Director in the American Beekeepers' Federation, mentioned that honey several times had been listed in the plentiful food supply program. This is a Government project, having to do with certain foods that are produced in excess of demand.

Seymour Bailey, State Inspector, spoke of the recently enacted Registration Law. Nine thousand, nine hundred and forty-seven apiaries have now been registered, needing only 53 more to make 10,000. A permit must now be obtained for moving bees out of the state. Furthermore, a certificate of inspection must be obtained when bees are brought into the state.

There are now four Deputy Inspectors, each of them having supervision over approximately ten counties. Out of the 88 counties, there are only nine in which no inspection work is being carried on. The total appropriation from all counties for inspection work is now $49,000.

Edgar Williams, veteran comb honey producer, of Ashtabula County, and one of the prominent beekeepers in the United States, said that comb honey production requires less equipment on the average than does the production of extracted honey. Mr. Williams winters in a single hive body in double-wall packed hives. His honey flow is mainly a fall flow and he never has any trouble in getting sufficient winter stores, for there are always good fall flows from goldenrod and aster. He never has to feed for winter.

Mr. Williams admits that he would get more brood if a shallow super were on all his 1400 hives but for comb honey production he doubts whether the advantages would pay for the extra equipment.

While double-wall packed hives are used throughout all of his apiaries, he always winters some colonies in single-walled unpacked hives. These colonies, however, do not have as much honey in the spring.

Instead of open top section holders, Mr. Williams uses seven wide frames, thus protecting the tops of the sections. To each frame is tacked a tin separator. He likes this arrangement because unfinished sections can easily be uncapped and extracted. Formerly, the uncapped extracted section combs were used as bait combs but he does not now bother with bait combs. He says the honey produced on bait combs is not quite as nice looking as that produced on foundation and he has no trouble getting bees into the supers. Mr. Williams clips his queens in April.

After trying motor-driven sand wheels and cutters of various kinds, he has gone back to hand scraping of sections, using a knife. He admits this is laborious work but he has never found a machine that does not deposit some sawdust or debris on the surface of the cappings. With his wide frames, he has only the edges to scrape.

Mr. Williams offered some advice to young men. He said that counting all the losses, the vexations and headaches, along with the profits and joy of living, his advice to young men today is to go into beekeeping and to produce comb honey. He said if he had to do it again, he would be willing to start out fearlessly in exactly the same path. This advice, he said, he had passed on to his sons.

Edwin J. Anderson, of State College, Pa., likened the morale of a colony of bees to the morale of a family. A good morale is a wonderful, motivating power. Bees do not get used to anything. They do not do things because they have done them before. Individuals are soon gone and others take their place. Each year they start anew.

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Chas. B. Hatton, Jefferson, Ohio, well-known comb honey producer in his apiary.

Left, Lyle L. Root of Ashtabula, Ohio, deputy bee inspector for Ashtabula County. Right, Edgar Williams, Pierpont, the veteran comb honey producer of Ohio.

There have been years in Pennsylvania when scale colonies have gained 25 pounds a day. This, he thinks, is the record in the state. His advice is to keep plenty of supers on, never letting the bees feel that they have filled all the space.

Emerson Long, the largest beekeeper in the state, referred to three types of beekeepers, the extensive, the intensive, and the pretensive. Admitting that he is in the business extensively, he said he makes every effort also to be intensive, and with that in view, never does anything to disrupt the colony program. On the contrary, he does everything to insure a good colony with a good queen and keep it in a good location. Commenting on locations, he said that sometimes a good location will last only four or five years, then it is necessary to move. He does not leave bees around where they can get nothing.

Mr. Long advocates two-story colonies for wintering, pointing out many advantages of the horizontal bee space in the middle of the brood chamber. Not only does he never have to feed sugar but he finds that pollen naturally stored in the brood combs makes unnecessary pollen supplements or substitutes.

Colonies in the story-and-a-half or two-story colonies will enter supers more quickly. Sometimes during a slow honey flow, bees will retreat into a single story. Mr. Long's practice is to raise some brood into the super. When work is well started in supers, top supering is then the practice. Queen excluders are used under all the honey supers.

When loading supers of honey into trucks, the supers are given a good shake, then set aside for a few moments to let the bees start out. By the time the supers are put onto the truck, most of the bees are gone and practically all of the rest leave when the truck is started.

Speaking of Nosema, Mr. Long feels that most Nosema is traceable to a lack of stores some time or other. The bees' vitality is low because of scanty stores and Nosema can get a start. By making sure that there is plenty of honey available at all seasons of the year, Nosema seldom bothers.

Mr. Long requeens half of his colonies each year, following the time-honored custom of clipping the right wings even years, and left wings on odd years. This enables him to tell, in most instances, the age of the queen. His main requeening is usually done in September, although he requeens as necessity indicates, for he plans to have surplus queens on hand.

A strong, two-story colony cannot be killed in the worst winter, says Mr. Long, but nevertheless, protection is needed. For many

years, the bees have been wintered in quadruple cases. To prevent drifting, the colonies are located in groups of four, just as they stand when protected by the quadruple case. Testing this method of wintering on thousands of colonies for many years, Mr. Long insists that beside the great advantage of the real saving in stores, the bees come out in the spring stronger, brighter, and in shape to build up quickly.

In April, when the cases are taken off, the colonies seem almost as heavy as they were in the fall. There is no moisture, for the dry material absorbs it. Brood rearing goes on as usual.

There are always some unpacked colonies, and while they winter, they consume much more honey and are not as strong in the spring. Whether in the four hive cases or on separate stands, only one entrance is used.

Over 100 people sat down to a delicious banquet after which **Jerre Frazier** of the G. B. Lewis Co., the inimitable toastmaster presided over a program which caused all to forget their troubles.

Paul Cutts, the package bee and queen shipper of Chipley, Florida, gave a very interesting talk on the New South.

H. H. Root showed some movie films of interest to beekeepers, including Mr. Cutt's film.

The following day **Chas. A. Reese** gave us a bird'seye picture of conditions in Ohio. The crop is very spotty. Bees are working red clover. Those who apply insecticides are becoming more conscious of the value of bees to agriculture and are trying to avoid killing bees.

Jack Deyell stressed the importance of intelligent fall management. To have populous colonies next spring we must have populous colonies to go into winter, ample stores of good quality, and adequate protection against the elements.

Ted Gran, Jr., Perrysburg, Ohio, told of his experiences in furnishing bees for pollinating legumes. He puts one strong colony per acre of alsike, and growers have averaged 6½ bushels of seed per acre but this year only two bushels were secured, due to bad weather. Mr. Gran has developed a loading device that requires only 15 minutes to put on a load of bees obviating much hard work. Faulty harvesting methods is a major cause of low seed yields.

George Rehman, president, and **H. R. Swisher,** vice-president, are to be complimented on the manner in which they handled the program.

Clifford F. Muth Passes On

The hand of death is laid upon another of our younger men—Clifford F. Muth of Cincinnati, Ohio, who was taken July 18, following a four-year illness. He was 55 years of age.

Mr. Muth, or "Cliff" as he was known to a host of friends in the beekeeping fraternity, succeeded his father, the late Fred W. Muth, in 1948, as President of The Fred W. Muth Company.

Mr. Muth was very active in civic and fraternal affairs and an avid sportsman. He was also active in Boy Scout work, having served as Scout Master of a troop. He was a member of a machine gun company, First Ohio Infantry, prior to World War I, and served during the war with that unit.

He leaves his widow, Mrs. Elizabeth Bayer Muth, a son, Captain Clifford F. Muth, Jr., with the air force in Maryland, and two sisters.

Our industry can ill afford to loose such a person in his prime, who has made such a worthwhile contribution to life and to the beekeeping industry. Fortunately he has a son to help carry on the business that was started by his grandfather, Charles Muth, some 90 years ago.

Mr. Clifford F. Muth

THE OLD WICKER CHAIR

That old wicker chair in the bee yard?
It isn't much use I'll admit,
The paint's weathered thin
And the seat is caved in,
It's hardly a safe place to sit.

Uncle John worked hard till near eighty,
But in his few moments of ease,
Through the back of that chair
You could see his white hair
As he'd sit and just look at the bees.

He didn't have much education,
But beemen—large, small, rich, or poor
Came, I don't know from where,
To that old wicker chair
To draw on his wealth of bee-lore.

Soft spoken, kindly and honest,
Godly faith in the World Beyond;
"If John says its so
That's all I want to know"
His word was as good as his bond.

The grass has grown over the rockers
And the weeds are piercing the seat,
Bees busily hum
But no more will come
The shuffle of feeble old feet.

Yes, that old wicker chair is plumb useless
It would be a disgrace to some lots,
But if you leave it to me
That old chair will be
Right out there with the bees' til it rots.

—Harris C. Harvey,
Williamsville, New York

SECOND GLANCES

(Continued from page 537)

in all phases of our industry, we owe him much.

Water is important to bees, says Propolis Pete (page 474). The statement needs to be emphasized, for if the supply is not present in a more convenient place, a yard can cause considerable embarrassment to the beekeeper by congregating around a stock tank, etc. In dry seasons it may even be necessary to have a supply in the yard, but start early, for as he says, they may not appreciate your efforts unless they are used to the location you wish them to visit.

That Institute recipe box looks like a dandy. That new idea of a picture on each card makes it different. Let's use them—and spread them around!

Asked & Answered

Top vs. Bottom Supering for Comb Honey

Question: When the bees are working at full strength is it as well to add new sections on the top as to place under the last one filled? My bees have been filling the sections as added on the top, and in placing the sections as needed there is less interference except there might be some travel stain on completed sections. —E. C. Ambrose, W. Va.

Answer: When producing section comb honey, we have tried adding supers on top as needed, also have used the method of putting the new or fresh super underneath the pile instead of on top. We like the top supering method because the sections are more likely to be well filled than when placed underneath the filled and partially filled supers. Furthermore, when the new supers are on top the bees can go up into the super if necessary. If they do not need this super they will not work in it. It should be said that with the top supering method the filled super at the bottom of the pile should be removed as soon as the sections are capped over to avoid travel staining by the bees. Some years ago when we had an unusually heavy flow in western Ohio and used the top-supering method, we would take off a filled super and put on an empty one once a week. Obviously, there must be a good honey flow and strong colonies in order to be successful in the production of section comb honey.

Honey Ferments in Cans

Question: This year, perhaps due to the long spell of extremely hot weather that we have been having, I am having trouble with the fermentation of extracted honey in storage, last year's crop. This honey was not extracted until it was sealed by the bees so that is not the cause. Some five-pound cans will blow their covers while others are all right. Of two 60-pound cans one is O. K., while the other is fermenting. The cans set right side by side. As far as I know all have had just the same treatment. What is the probable cause and is there any way in which the fermented honey can be reclaimed? Can it be heated and the alcohol driven off and it re-fed to the bees for winter feed?—R. W. Hargrave, N. Y.

Answer: It is not uncommon to have honey gathered one year ferment the next. This is more likely true of fall honeys than of properly ripened summer honeys. In some instances fermentation is caused by yeasts which are present and come in contact with the honey. The common cause of fermentation is thin or unripened honey which contains an abnormal amount of moisture. Occasionally, however, honey which is reasonably thick and apparently well ripened will ferment when warm weather comes. Fermented honey can be made suitable for selling or for table use by heating it to 160 degrees F. for about 20 minutes, then cooling it. This heating drives off the excess moisture and at the same time destroys any yeasts which may be present. One way to heat the honey is to put a couple of 5-gallon cans of honey in a washboiler over a hot plate, heating the honey to 160°. The cans of honey should rest on small pieces of wood so that water can circulate underneath the cans. The honey should be stirred while it is being heated. If you do this we feel sure that this processing will result in honey that will not ferment.

Skunk Bothers Bees

Question: There are skunks in the vicinity of my apiary. I have seen signs of where they have the dirt all padded down around the hives when they visit them at night. The bees are very cross which is abnormal. Should I leave the new location or what would you advise? Just how much damage can or do they do?—L. J. Brooks, Michigan.

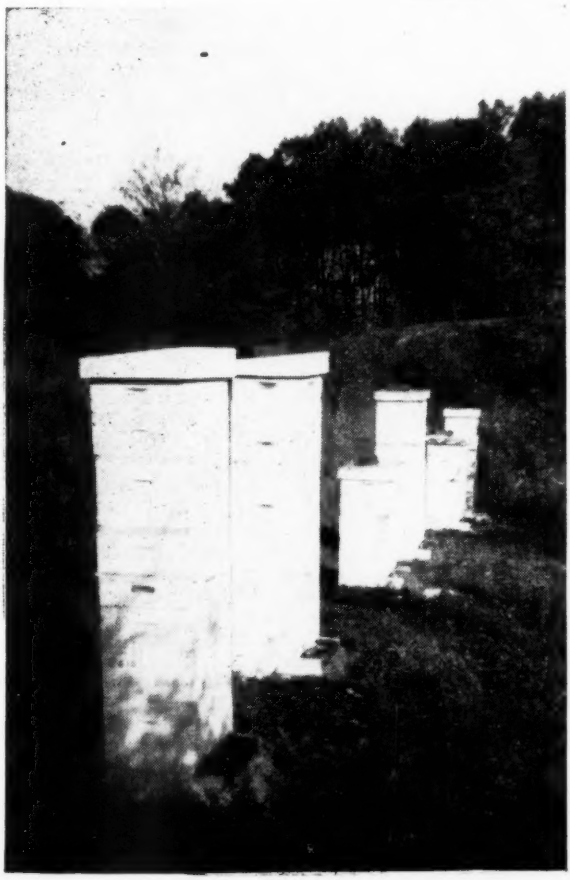
Answer: Regarding skunks in the apiary, it is a little difficult to say what you should do under the circumstances. We do know that in some instances, skunks do a considerable amount of damage to bees. They will claw at a hive entrance late in the evening, and when the bees come out on the alighting board, the skunks will eat them. Colonies that are disturbed by skunks are likely to be quite cross when handled the following day. Some beekeepers have trapped the skunks; others have gone after them with a shot gun; others have poisoned them, putting a small amount of strychnine in a raw egg near the entrance. If your location has promise of being unusually good, we suggest that you plan to leave the bees where they are—at least for this season. Perhaps you can dispose of the skunks.

Bees Wouldn't Store Honey Above Queen Excluder

Question: Reading the "Asked and Answered Column" in the August 1952 issue relative to "Bees Do Not Work In Supers", I do not entirely agree with the answer given. I have found that many

times bees refuse to work in supers because they do not care to go through queen excluders. I had a queen introduced in May of this year which just refused to stay below in the brood chamber provided so I put on a queen excluder and although the majority of brood hatched in the supers above, the bees just refused to fill the supers and deposited the honey in the chamber below. This queen was, as you can see, a very prolific young laying queen for in a month's time she filled nine of the ten frames with brood. I took the queen excluder off after the queen had been oriented to stay below and then the bees started to transfer the nectar gathered and stored in the brood chamber to the supers. Many times nectar is coming in so fast that bees won't take the time to store it in the supers and take the easiest way possible thus storing the honey in the brood chamber. Mr. Gibson may be misled by the answer and kill off an otherwise valuable queen. —Bill Davis, R. I.

Answer: There is something to what you say in your letter of July 31, regarding a colony which may not work in the supers. Some beekeepers tells us that their bees are somewhat larger than ordinary bees and consequently do not pass through the wires of a queen excluder readily. If this is true, and it may have been in your case, it would be preferable to leave the excluder off the hive. Personally, we like to use queen excluders, especially during a year when the honey flow is not as rapid as it sometimes is. When queen excluders are used, we know where to find the queens. Some beekeepers put queen excluders on after the honey flow starts and bees have been storing in the supers. We get many questions from beekeepers over the country and in some instances, it is really difficult to give the correct answers, mainly because we have to use our imagination at times in trying to visualize what is actually happening in the hives in question.



Part of an apiary near Medina, owned by Delos Mellert who helps to make bee hives in The A. I. Root Company factory and is Secretary-Treasurer of the Medina County Beekeepers' Association which was organized recently. This shows skyscraper hives before the 1951 crop of surplus honey was removed.

Just News

Kansas State Beekeepers' Association will hold its 51st annual meeting Sept. 7, at High School Auditorium Altoona, Kansas, with M. C. Mitchell, President, K.S.B.A., Presiding.

9:00 a.m. Committee Meetings.
Legislative committee, A. V. Small, Chairman
Marketing committee, V. H. Adee, Chairman
Nominations committee, Leroy Churchman, Chairman
Education committee, Roger C. Smith, Chairman
11:00 a.m. The Significance of Hybrid Bees
G. H. Cale, Editor, American Bee Journal, Hamilton, Ill.
11:30 a.m. Discussion
Noon Basket Lunch
1:00 p.m. The 1952 Honey Price Support Program
Thurston A. Blakely, Food Distribution Branch, P.M.A., Oklahoma City, Oklahoma
1:30 p.m. Discussion
1:45 p.m. Alfalfa Pollination in Central and Western Kansas
R. L. Parker Kansas Agricultural Experiment Station.
2:00 p.m. Honeybee Pollination of Alfalfa in the North Platte, Nebraska Area
E. H. Adee, Sutherland, Nebr.
2:20 p.m. Discussion
2:30 p.m. Kansas Beekeepers and the American Beekeeping Fed.
Glenn O. Jones, Sec. of American Beekeeping Federation, Atlantic, Iowa
2:50 p.m. Discussion
3:00 p.m. Business Meeting
Reports of Committees.

* * * * *

The **Middlesex County Beekeepers' Association (Mass.)** held its regular outdoor meeting at the out-apiaries and summer home of member James Delorey on the Knopps Pond in Groton, Mass. A large attendance saw the "Club Hive" opened, and many took a swim in the pond which is about 1½ miles long.

The next regular meeting, the last outdoor meeting of the 1952 season is to be held at the out-apiaries of member Victor Thomas at Camp Chickadee on River Edge Road, in Billerica, Mass. Those interested in beekeeping are welcome at this meeting at which time the Club hive will be given to some lucky attendant as well as many other prizes to be distributed at that time, one of which is a one year subscription to "Gleanings" donated by member R. W. Corrigan.

The Association has expressed its desire to tie in with the USDA-PMA Program for the ALL-OUT promotion for honey and will cooperate with Harry W. Watling, officer in charge of the Food Trades Division of the Food Distribution Branch.

The Board of "Experts" of the "Association" will answer Questions on the subject of Beekeeping and more especially on the subject of "Wintering Over". — John H. Furber, Sec.-Treas.

* * * * *

The second issue of **"Brasil Apicola"** a journal published by Dr Edgard Vieira Cardosa of San Paulo, Brazil, reached our office recently. It is a good looking journal and will doubtless render worthwhile service to beekeepers throughout that country.

* * * * *

We wish to compliment the **British Bee Journal** on the neat appearance and "new look" of recent issues—especially the front cover.

* * * * *

Dr. V. G. Milum, apiculturist at the University of Illinois, has recently been promoted to a full Professorship of Entomology.

* * * * *

The **Westchester County Beekeepers' Association** will hold its next meeting on Sunday Sept. 21, at 2:30 P. M., at the home of Mr. Edw. Stangl, 24 Grand Blvd., just off the White Plains Post Road, Scarsdale, N. Y. Joseph L. Mayer who raises queens at Clifton, N. J., will be our guest speaker. He will tell us of his observations at the recent Penn State Short Course on Beekeeping he attended. Refreshments will be served. visitors are always welcome. —Carlton E. Slater, Publicity.

* * * * *

From the Editor's Note Book: Having attended seven bee meetings within the past few weeks in Wisconsin, Michigan, Pennsylvania, and Ohio, it is impossible, in the limited space available, to give detailed reports.

The Menomonee Falls, Wisconsin, meeting held July 22 at Mr. Diehnelt's place (a vote of thanks is due Mr. Diehnelt for his gracious hospitality) was well attended. J. F. Long, state apiarist, showed a hive lifter used by inspectors for lifting piles of supers off hives to inspect brood chambers without molesting the bees in supers. Also a weed-burner for scorching out diseased hives is used.

Harriett M. Grace, director of the American Honey Institute, in telling of work done in honey promotion, mentioned a one-half hour broadcast given recently after which five pounds of postal cards were received the day following and three pounds on the second day. A steady stream of matter on honey is flowing from the Institute office in Madison, Wisconsin.

Henry Dadant told of progress being made in developing strains of hybrid bees that possess desirable characteristics. The work is difficult, due to the nature of the honey bee. Scientific breeding requires much painstaking effort and skill.

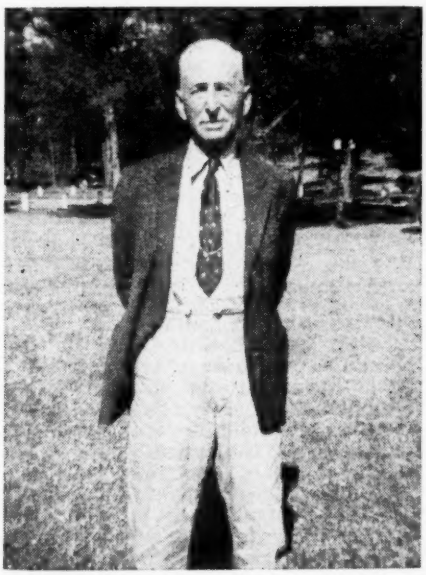
The Eau Claire, Wisc., meeting on July 23 drew a good crowd. **"Bob" Knutson,** as per usual, could tell some hair-raising bear stories that are true. Bears in North Wisconsin are still a problem for beekeepers. Nosema appears to be prevalent each season. The honey crop is spotted but on the whole quite good, better on light sandy soils this year than on heavier soils.

The Frankenmuth, Michigan, meeting held July 24 was unique in that a beauty contest was held. "Pat" Norman of Rochester, Mich., was the winner and she will appear at the state fair in a program sponsored by beekeepers to promote sales of honey. **Ray Hutson,** of Michigan Agricultural College, in speaking of insecticides emphasized the importance of applying poison material before blossoms appear. There should be a better understanding between beekeepers and those who apply insecticides.

At the **Bellaire meeting** held July 25 Don Barrett, state apiarist, mentioned the appearance of European foul brood in some counties. Just why it is found in some sections of the country and not in others is as yet somewhat of a mystery. Perhaps soil and climatic conditions enter the picture. Eternal vigilance is needed to control brood diseases.

The **Tri-county** meeting was held outside of Detroit on July 27. **Oscar Schmidt,** in relating some of his beekeeping experiences, referred to the change in farm practices that affect beekeeping. Clovers are now cut early with modern machinery. In the old days the mowers drawn by horses were used and more time was available to the bees for gathering nectar. Commercial beekeepers have to be ready to meet all emergencies.—M. J. Deyell.

Left: D. P. Barrett, Shepherd, Michigan state apiarist. Right: Prof. E. C. Martin, East Lansing, bee extension specialist for Michigan.



Frank E. Greeler, Nielsville, Wis. deputy apiary inspector for Clark County. Mr. Greeler is 82 years young and carries on his inspection work each day during the season. More power to him.

The **Pennsylvania summer meeting** at Canandahota Lake on July 30 was quite well attended. Most beekeepers present had not secured much white honey but looked for a good fall crop. A brood disease that appears to be rather unusual was mentioned by Mr. Benton the county inspector. It is being watched closely and investigated.

XUM

American Honey Institute News Notes

By Harriett M. Grace, Director
Commercial State Bank Building Madison 3, Wisconsin

One of our favorite wartime stories involves a war munitions plant where all operations were held in strictest secrecy. As a double precaution a guard stationed at the exit gate examined all employees as they left to make sure no one was stealing anything.

As it happened one day, one of the guards was confronted with an employee pushing a wheelbarrow loaded with hay. "What do you have there?" the guard asked.

"Just some hay," was the reply.

Convinced that the hay was a convenient place to hide something the guard searched frantically through it. To no avail. He could find nothing. So he let the employee pass.

Next day at closing time the same guard was approached by the employee again with a wheelbarrow piled high with hay. Again the guard searched fruitlessly, and again he had to let the worker by.

This went on every evening all through the war.

Several years later when the war was over and the guard was returned to civilian life, he chanced to see on the street the same employee who had so diligently pushed the wheelbarrows loaded with hay. He stopped him to ask:

"Say, tell me; I'm sure you were stealing something when you worked at the munitions plant. Tell me what it was."

"Sure," said the employee. "I was stealing the wheelbarrows!"

The point of the story is simple. Sometimes the most obvious of facts are the most easily overlooked.

But it is often not so easy to apply such a lesson to ourselves. We in the honey industry must not be like the guard; we must not let the obvious slip by us while we concern ourselves with "needles in the haystack", so to speak.

For instance, it should be obvious to all of us that in the competitive markets of today, a combination of beekeepers can fare better than a single one.

Hence the American Honey Institute is organized.

It should be obvious that with the world in the changing state it is today, someone must be constantly looking out for honey's interests.

That someone cannot be a single beekeeper who has also to tend his bees and process his honey. Instead, that someone has become the American Honey Institute.

It is obvious that products to sell must be promoted on a national scale.

That promoter is the American Honey Institute.

So it is also obvious that the American Honey Institute, which performs all of these valuable functions, must be fully supported by the nation's beekeepers.

And here is the punch line: **It is.** The American Honey Institute enjoys a good reputation, and a well-deserved one. Beekeepers are well aware of the obvious fact that the American Honey Institute is one of their most valuable assets.

LOCAL NEWSPAPER ADVERTISING A BIG HELP

(Continued from page 555)

turned out that the writer had exceptional ability.

In any event the "Letters to the Editor" column is always open to contributors. Likely as not there will be an occurence of bees swarming in a public place. A clear, concise letter from a local beeman stating that swarming bees are generally harmless, and that the situation can be handled by any competent beekeeper, will be widely read and attract attention. Sometimes this will directly counteract any unfavorable publicity the bees might have brought on themselves.

Such opportunities should never be passed up with the thought that it doesn't matter anyway. It is by attention to these matters that beekeeping can place itself before the public and win the place it deserves.

It may be necessary to mention that the writer of material like this can hardly expect to be paid by the newspaper. A by-line, or a note explaining the circumstances of the contribution to the paper's columns, is about all that can be expected. There is plenty of professional writing available on any subject, but not on the local level. Publicity for the local association must be its own reward.

New York State College of Agriculture at Cornell University

Dr. E. J. Dyce (right), professor of apiculture at Cornell, is showing a new labor saving device to Orlando Munoz, chief of apiculture in Costa Rica. This equipment is designed to move a lot of hives with little effort.

Ithaca, N. Y., July — Orlando Munoz, professor of apiculture at the National School of Agriculture and chief of apiculture in the Ministry of Agriculture and Industries of Costa Rica, is studying American beekeeping methods with Dr. E. J. Dyce at Cornell University.

Professor Munoz owns and operates 1000 colonies of bees besides doing his usual work of teaching, research, and the manufacture of honey wines. He is also responsible for the handling and grading of Costa Rican honey for export.

Pollination and bee diseases are two important subjects that Munoz is studying at Cornell. More than 150,000 acres of coffee are grown in Costa Rica, so it is important to know the effectiveness of honeybees in pollinating and increasing the size of the coffee crop. With no major bee disease in Costa Rica, the visitor wants to learn field and laboratory identification to prevent the entry of any diseases into his country.

To further his practical knowledge of bee diseases, Munoz has worked with apiary inspectors of the New York Department of Agriculture and Markets.

Other points of study for the Costa Rican include research on honey wines, laws affecting honey bees, labor-saving equipment for beekeepers, and the fermentation and processing of honey.

Professor Munoz will spend four months in the United States visiting beekeepers and studying their methods. Upon completion of his work at Cornell, the Costa Rican specialist will visit apiary supply companies, other state universities, and field laboratories of the U. S. Dept. of Agriculture. His tour is under the auspices of the Point 4 Program.

XUM

Buy and Sell

Only responsible advertisers and honest advertisements will be admitted to these columns. References required from new advertisers not known to us. Rate: 15c per counted word, each insertion. Each initial, each word in names and addresses, the shortest word such as "a" and the longest word possible for the advertiser to use, as well as any number (regardless of how many figures in it), count as one word. Copy should be in by the 10th of the month preceding publication.

HONEY FOR SALE

WE BUY AND SELL all varieties of honey. Any quantity. Write us for best prices obtainable. The Hubbard Apiaries, Onsted, Michigan.

Any GRADE—Any amount. Alexander Co., 819 Reynolds, Toledo, Ohio.

IOWA Honey, one can or truck loads. Russell D. Smalley, Beaver, Iowa.

PALMETTO, and Mangrove honey in new sixties. Peter W. Sowinski, Fort Pierce, Fla.

CLOVER extracted honey in sixties. Abram Brubaker, Lancaster, Pa., Rt. 1.

Michigan's finest raspberry, basswood, clover comb honey, in 4 x 5 window cartoned sections. Extra Fancy, $7.00; Fancy, $6.00; No. 1, $5.00; No. 2, $4.00; case. E. Z. Quick Way B Farms, Walloon Lake, Michigan.

TUPELO HONEY — Ten-pound pails, $2.10 express charges collect. Marks Honey Co., Apalachicola, Florida.

AMBER HONEY—New sixties. Priced right. Free sample. Crenshaw County Apiaries, Rutledge, Ala.

MICHIGAN'S FINEST WHITE CLOVER HONEY. New sixties. Fully ripened. You will be pleased. Sample, 20 cents. John McColl, TECUMSEH, MICHIGAN.

FOR SALE—White bottling grade honey by the truckload. Walter Roose, Sac City, Iowa.

CLOVER COMB HONEY—ready to ship at once. Write for prices. C. W. Schrader, Waterville, N. Y.

Honey, white clover, 18c per lb. in single cans, 17c in lots of 5 cans or more. Lose Brothers, 206 E. Jefferson, Louisville, Ky.

White clover honey in new sixties. Finest quality. Single can 16 cents, two cans, 15 cents, 5 can lots, 14½ cents a pound. F.O.B. Write for prices on large quantities. Paul Englehardt, Antwerp, N.Y.

NEW CROP finest quality light table honey. Orange-palmetto, saw palmetto, and mangrove, 11c per lb. in 55-gal. steel drums; $8.50 per 60-lb. can; $8.00 each three or more cans. All F.O.B. here. F. H. Nelson, Murdock, Fla.

WHITE CLOVER honey. Write for prices. Lloyd Allen, Tipton, Michigan.

COMB HONEY for sale—also will trade comb honey for extracted honey. Gordon C. Pratt, R. D. 2, Munnsville, N. Y.

HONEY AND WAX WANTED

BEEKEEPERS TAKE NOTICE—We can not guarantee honey buyers' financial responsibility, and advise all beekeepers to sell for cash only or on COD terms except where the buyer has thoroughly established his credit with the seller.

CASH FOR YOUR HONEY—Light extracted or comb. Regular trade send sample. 60-pound cans furnished if desired. W. R. Moomaw, Stone Creek, Ohio.

CASH FOR BEESWAX. Write as to quantity and we will quote price. Muench-Kreuzer Candle Co., Inc., Syracuse, N. Y.

HONEY WANTED—All grades and varieties. Highest cash prices paid. Mail samples. State quantity. HAMILTON & Company, 1360 Produce St., Los Angeles 21, California.

HONEY WANTED, any amount. If you want more for your honey, sell it to Cloverdale Honey Co., Fredonia, N. Y.

ALL GRADES HONEY AND WAX WANTED—Mail samples, advise quantity and cash prices delivered to us. HONEY SALES COMPANY, 1808 NO. WASHINGTON AVE., MINNEAPOLIS 11, MINN.

BEFORE YOU SELL your clover honey contact us. Send samples and tell us how much you have. The Delaware White Clover Apiaries, 139 West William St., Delaware, Ohio.

WRITE FOR shipping tags and quotations on rendered beeswax. We buy from one pound up and if you have over 25 pounds let us work it into foundation for you at a 25 percent saving. Walter T. Kelley Co., Paducah, Kentucky.

CASH for your comb honey and all types extracted. Send sample and best price. Buckeye Honey Co., 3930 No. High St., Columbus 14, Ohio.

WANTED — White extracted or comb honey. Send sample. Millersport Honey Co., Millersport, Ohio.

WANTED three carloads of buckwheat honey two carloads of Florida orange blossom honey in barrels or cans, two carloads of southwestern alfalfa or cotton honey. Cash and top prices. Alexander Company, 819 Reynolds Road, Toledo, O.

WANTED—Light amber clover, amber, goldenrod, buckwheat. Advise what you have for immediate delivery. Roscoe F. Wixson, Dundee, N. Y.

WANTED — comb and extracted honey. Wm. March, R. D. 3, Mantua, Ohio.

CUT COMB CHUNK, clover preferred, truck lots or less. Cash on delivery. Lose Brothers Inc., 204-206 E. Jefferson, Louisville, Ky.

WANTED car loads or less bottling honey. Cans exchanged or furnished if wanted. Send samples to Honeymoon Products Co., 39 E. Henry St., River Rouge, Mich.

FOR SALE

WRITE FOR CATALOG — Quality Bee Supplies at factory prices. Prompt shipment. Satisfaction guaranteed. The Hubbard Apiaries, Manufacturers of Beekeepers' Supplies and Comb Foundation. Onsted, Mich.

The only comb foundation plant in the east. We sell foundation, work your wax, render combs and cappings. Robinson's Wax Works, R. D. 3, Auburn, N. Y.

BEE SUPPLIES. Catalog free. Hodgson Bee Supplies, Ltd., 575 13th Ave., New Westminster, B. C., Canada.

BEE SUPPLIES—Tin packages; 10 sizes glass jars; paper shipping supplies; window cartons and other items. Roscoe F. Wixson, Dundee, N. Y.

FOR SALE—100 colonies, and all equipment. Crop still on. Honey packing equipment, including filter press. Mrs. C. H. Denny, 483 Moody St., Akron, Ohio.

THE BIGGEST BEE SUPPLY Catalog published (64 pages) free for the asking. Listing many items not found in other Catalogs. No agents—buy direct and save 20%. WALTER T. KELLY CO., PADUCAH, KENTUCKY.

GET THEM while you can. New or used cans and Root Supplies for cash or honey of any kind. L. E. Hicks, 3930 N. High St., Columbus 14, Ohio.

FOR CHRYSLER ALL-STEEL electric welded queen excluders in the U. S. A., write to: Prairie View Honey Co., 12303 12th Street, Detroit 6, Michigan. Ask for Circular E 2.

FOR SALE—600 10-frame factorymade extracting supers and brood chambers with drawn comb. Hive stands, bottom boards, covers. No disease. Frank Kearns, Austin, Minn.

FOR SALE — HAZEL-ATLAS modern honey jars, popular sizes. Priced right. Hiltner's Apiaries, North Creek, Ohio.

FOR SALE—Complete set of Gleanings, 1875-1950. Lacks only six volumes. Francis Higgins, Gallaudet College, Washington, D. C.

FOR SALE — New heart cypress 10-frame bottom boards. K. D., 10 or more, $1.00 each; 50 or more, 90 cents each; 100 or more, 85 cents each. 1 nailed up sample, post paid, $1.25. Fred L. Poole, Elizabethtown, Rt. 2, Box 67, No. Car.

BEES for sale. New and used 10-frame supplies. 200 good two-colony winter cases, with packing material, cheap. Ray Wilcox, Odessa, N. Y.

Ten-frame used equipment clean and in good condition. Hives complete with frames, $2.00. Supers with frames, 90c; supers, 40 cents. F. J. Smith, Castalia, Rt. 1, Ohio.

FOR SALE — 20 colonies and enough new and used equipment for 75 more hives. A. Longo, 76 Watervale Rd., Medford, Mass.

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Michigan Headquarters for

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Carloads and less than carloads. Mail sample and best prices in all grades.

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Quality Bred Young Italian Queens

Quantity	Price
1-24	$1.00 each
25-99	.85 each
100-up	.75 each

The Strain Preferred by Leading Honey Producers

York Bee Co.
(The Universal Apiaries)
Jesup, Georgia, U.S.A.

LADY LIKE CAUCASIAN

bees in our testing apiaries in a North Central State more than doubled that state's average per colony honey crop in 1951. Our breeding queens for this season were selected for disease resistance, honey production, and gentleness. Their daughters will produce for you if properly handled.

Select untested Queens available through Sept. 20th

1-9	$1.10 each
10-25	1.00 each
25-50	.90 each
50 or more	.75 each

Queens clipped and marked free on request. Please print name and address.

CAUCASIAN APIARIES
CASTLEBERRY, ALA.

Requeen with
B A R G E R ' S
NORTHERN ITALIAN QUEENS
Large deep thorax, long-legged beauties
Untested 1-24, $1.00; 24-up, 75 cents
Select tested (in large cages) $2.00
Clipped — Airmailed — Painted

BARGER APIARIES
CAREY, OHIO

Dear Customer:

We have sold our queens for the remainder of the season, but we are looking forward to serving you with good queens and packages in 1953.

Thanking you kindly one and all.

Mitchell's Apiaries Bunkie, La.

ITALIAN QUEENS
70c each
Quality Does Not Cost — It Pays —
The Wilbanks Apiaries
Claxton, Georgia

FOR SALE—100 colonies, supers and miscellaneous equipment. All or part. State inspected, disease free. Quitting because of poor health. Bees will be destroyed near end of October. Investigate now. Geo. Olowach, Custer, Mich.

BECAUSE of ill health, 55 colonies of bees with all supers and extra hives and supers including honey. No disease, $5.00. Earl Henry, Gambier, Ohio.

WANNA GOOD BEE BUSINESS? 250 colonies; supplies for 300. Excellent locations including pollination payments. Ultra-modern honey house in suburb, with extracting and packing equipment. Good local market, town of 12000. The Minnesota Beekeeper, Box 176, Red Wing, Minn.

FOR SALE: 4-frame Root's reversible power extractor No. L. 25 with motor, belts, and handle for hand extracting and four capping baskets, No. 1 shape, $60.00. 120-gallon honey storage tank with gate, $25.00, same as new; also new and used equipment. Linders Store, Delphos, Ohio.

BEES AND QUEENS FOR SALE

We use all possible care in accepting advertisements but we cannot be held responsible in case disease occurs among bees sold, or if dissatisfaction occurs. We suggest that prospective buyers ask for certificate of inspection as a matter of precaution.

NORTHLAND ITALIAN QUEENS—For production. $1.00 each; 10 up, 90c. Shirl Baker, Rodney, Michigan.

CAUCASIAN QUEENS, 75 cents each, any number. Lewis & Tillery Bee Co., Greenville, Ala.

YANCEY HUSTLER QUEENS — Three-band Italians; bred for business, $1.00 each; $10.00 per dozen. All guaranteed. Caney Valley Apiaries, 2500 Nicholas, Bay City, Texas.

SHORT'S QUEENS ARE GOOD QUEENS. Try them and you will find their colonies tops in production, gentleness, and freedom from diseases. Three-banded Italians only. Used by leading honey producers for more than 30 years. Requeen now for maximum production next year. $1.00 each; 10, $9.00; 25, $20.00. Prompt shipment. Postpaid. H. C. Short, Fitzpatrick, Ala.

750 colonies of bees in two-story ten-frame hives. With all equipment for extracted honey production. Must sell because of poor health. Geo. Morrison, Cloverdale, Ohio.

YELLOW ITALIAN bees and queens. Real honey producers, personally reared. Queens 80c; 25 up, 75c, airmail. O. E. Brown, Route 1, Asheboro, N. C.

THREE BANDED ITALIAN queens. Good workers and gentle. Select, 1 to 25, $1.00 each; 25 up, 90 cents. Alamance Bee Company, Graham, N. C. Phone 4703.

CAUCASIAN QUEENS, extra good workers and very gentle. Requeen now and make sure of good hives for next spring. 1 to 25, $1.00; 25 up, 90c. Black River Apiaries, Currie, N. C.

GOLDEN ITALIAN QUEENS. Best of quality and real gentle. Select queens, 1 to 25, $1.00 each; 25 up, 90c each. Carolina Bee Farm, Graham, N.C. Phone 7731.

HELP WANTED

Applications wanted for year around work in commercial beekeeping. Give experience, age, and salary details in first letter. York Bee Company, Jesup, Ga.

SEEDS

HONEY PLANTS our specialty. Catalog on request. Pellett Gardens, Atlantic, Iowa.

EXTRACTORS FOR SALE

FOR SALE: Root 45-frame Simplicity extractor. Irvin VanDevier, Medina, Ohio.

EXTRACTOR FOR SALE, used Woodman 30-frame extractor with honey storage tank. Good condition. Eli Niswander, Leipsic, R. R. 4, Ohio.

WANTED

WANTED two-frame extractor. Root preferred. Joseph Lechwar, R. D. 1, Box 406, New Castle, Pa.

MAGAZINES

THE BEE WORLD, international and scientific journal on bees and beekeeping, with apiculture abstracts. Monthly, including membership in the Bee Research Association, $3.00 per annum, including apicultural abstracts. Dr. Eva Crane, Director, 55 Newland Park, Hull, Yorks, Eng.

Know interesting facts concerning the bees of India through the INDIAN BEE JOURNAL, published in English by the Bhupen Apiaries (Himalayas), Ramgarrh, Dist. Naini Tal, U. P., India, or available through them. Subs. Rs7/ or 10 shillings or 2.25 dollars per annum. Single copy, Rs ¼s. 1/9 or 40 cents (International Money Order). Payment in mint postage stamps of your country accepted.

Read the South African Bee Journal. Published every two months. Subscription 7/6 per year to the Treasurer, P. O. Box 3306, Cape Town, South Africa.

DO YOU FIND it difficult to secure information about sheep and sheep ranching methods? The SHEEP AND GOAT RAISER reaches more sheepmen with more information on range sheep than any other magazine published. Subscription $1.00. Hotel Cactus, San Angelo, Texas.

GOOD QUEENS

Italian or Caucasian

Customer: If you want queens that will pay off in the future and produce bees that a man can handle with pleasure, send your requirements to me, for I have them. 60c ea.

Farris Homan

Shannon, Miss.

Hollopeter's Queens

Reared in the North from Northern stock full of vim, vigor, and vitality. Highest quality and prompt service during the August and September buckwheat flow. Good time to requeen.

— Prices —

1 -9	$1.00 ea.
10 -24	.90 ea.
25 -49	.80 ea.
50 -99	.75 ea.
100-up	.70 ea.

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Rockton, Penna.

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New South Wales, Australia

LIVE AND LEARN

(Continued from page 538)

goldenrod usually isn't so hot. It has a sour aftertaste something like the smell that comes from the hive when the bees are boiling it down. I have a good description of that smell, but am too refined to put it in writing.

By the way — my "outyard", after making a start that looked like I was going to have to buy more equipment, is standing still. I wish that my prize colony there was on a scale. I never saw anything grow so fast. No kidding, they were filling a super a week for a spell, that is, a shallow. It now has eight shallow supers on it, six full and two partly full, and has been that way for three weeks. What would they have done if this darned drought hadn't come along?

OFFERING - - -

QUEENS -

Now ready for shipment Kelley Island 3 Way Hybrid and Regular Italians

1 to 25 . . . . . .85 each
26 or more . . .75 each

"They Produce"

Shipper of Package Bees and Queens

Rossman Apiaries

Formally Rossman & Long
P. O. Box 133
Moultrie, Ga.

CAUCASIANS
CARNIOLANS

Hardy, Prolific, rapid build-up, best of workers. Caucasians have the longest tongue of any race. Both races build beautiful white combs. BOTH ARE THE GENTLEST OF ALL RACES OF BEES. Gentleness is safest in towns, near neighbors, or near streets or highways. Gentleness saves time, sweat patience, and work. Discount on quantity orders. Ask. More and more beekeepers requeen during September.

Prices, Both Races:

Untested Queens	$1.00 each
Tested Queens	1.75 each

By Air Mail

Albert G. Hann
Glen Gardner, New Jersey

The New Zea'and Beekeeper
The Quarterly Magazine of the National Beekeepers' Association of New Zealand. Better Beekeeping—Better Marketing. Subscription, 8 shillings per year, payable to

THE GENERAL SECRETARY
Box 19 Foxton, New Zealand

PROTECT YOUR FUTURE. BUY YOUR SAVINGS BONDS NOW.

SELLING AT THE ROADSIDE MARKETS

(Continued from page 535)

makes an added appeal to the sense of taste as well as to the eye.

Some roadside sellers are using folders containing information concerning honey, also recipes for the use of honey in cooking. A folder is attached to each package of honey sold by means of a small rubber band. This certainly helps to further the use of honey. A classified or display ad in the local paper also helps. It brings honey to the attention of many people who would not otherwise know about its being offered for sale.

Telling the Story of Honey

Roadside selling stands should have attendants well versed in honey, how it is produced, and its food value. In fact, the salesman should be posted with information concerning bees. Beekeeping is such an interesting subject that the interest of any prospective customer can be held until he decides to try out a package of honey. In order to captivate the interest of those who do not know the virtues of honey, there is a little trick that can be worked to hold the attention of the customer long enough for the salesman to tell the story of honey. Take a glass jar of honey and tip it upside down. The air bubble will travel upward. This bubble has the appearance of a balloon. Simply tell the prospective customer that you put a balloon in each jar for the children to play with.

Roadside Selling on a Large Scale

In order to dispose of a large crop of honey, a chain of roadside stands must be established. In fact it may be necessary to have a dozen or more stands on well-traveled roads. The stands must be far enough apart to be profitable and should be located on different roads if possible. The beekeeper operating the stands is kept busy supplying them with honey and educating the operators of the stands as to the best selling methods. Usually, the roadside sellers are given a commission on sales.

Advantages of Roadside Selling

While it would be impracticable and impossible to market all of the honey or even a major portion of it through roadside selling, this method of selling has some distinct advantages to the beekeeper and to the industry as a whole.

(Continued on page 575)

REQUEEN WITH OUR HIGH PRODUCING STRAINS

	1-24	25-99	100-up
Dadant Starline Hybrids	$1.20	$1.15	$1.10
Three-Banded Italians	.70	.65	.60

Queens clipped, painted, and air mailed upon request

GARON BEE COMPANY.....Donaldsonville, La. U.S.A.

"Magnolia State Italians Our Old Proven Line

1-24	$0.95
25-99	.90
100-up	.85

Dadant's "Starline" Improved D. R. Hybrids

	$1.20
	1.15
	1.10

All "Starline" Queens Clipped and Marked
"Magnolia State" on request only.
Select Tested of the latter $1.50 each.

JENSEN'S APIARIES MACON, MISS. U.S.A.
"The business QUALITY built."

"GULF BREEZE" ITALIAN QUEENS

Successful wintering and the 1953 honey crop depends entirely on the QUALITY of your queens. GULF BREEZE is one of the most popular strains in America today. Have you tried them yet? Why not?

Prices 1-24 ..... 80c each 25-up ..... 75c each AIR MAILED

BESSONET BEE COMPANY
Donaldsonville, La.

STARLINE SUNKIST ITALIANS

Starline prices:
1-25, $1.20 25-99, $1.15 each
Highest quality queens only.

Italian prices:
55c each while they last
Clipped, postpaid, satisfaction.

SUNKIST BEE CO. CONVENT, LA.

Peace is for the strong . . .
Buy U. S. Defense Bonds regularly!

BEE LINES TO THE EDITOR

(Continued from page 516)

"Gleanings is very welcome here. It's nice to know how brother beekeepers are faring in U.S.A. and Canada.

"One remark that one of your contributors made a little while ago struck a responsive note here. He mentioned the days of Dr. Miller, Doolittle, and others of their time. I'm afraid they lived and wrote in a different world. What a pity we couldn't catch something of the spirit that governed their lives. But however I try I never seem to succeed as there's always some power that never seems to let one rest and really enjoy our bees. Speed and more speed and more production, better methods of working, but not one tiny bit more happiness, or should I say, real contentment?

"My Dad was a subscriber to Gleanings as far back as about 1914. I still enjoy reading some of the old copies when I can find the time.

"Most of Eastern Australia had a very dry time last season and honey production was very low but prospects at present look much brighter and we here are preparing for a good crop."—K. M., Aus.

We are sold out of queens for this year. Thanking you for the nice volume of bu ines.
THE DELAWARE WHITE CLOVER APIARIES Delaware, Ohio

DADANT'S STARLINE **RICH'S LEATHER ITALIANS**

For pleasure or profit we have the two most outstanding strains available.

Only young laying queens that have produced a good compact brood pattern are caged for shipment.

These strains are under constant test in our honey production yards along with other leading breeds.

We guarantee that you will be more than pleased with their performance.

Live delivery guaranteed, clipped, and marked with a white dot for your convenience at no extra cost.

Why not requeen this summer and help prevent swarming next spring?

DADANT'S STARLINE		RICH'S LEATHER ITALIANS	
1-24	$1.30	1-24	90c
25-99	1.20	25-99	80c
100-up	1.10	100-up	75c

THE RICH HONEY FARMS **JEANERETTE, LA.**

Dadant's Starline Hybrids **John Davis Italians**
Produced in Little's Apiaries

	Queens	Packages 2-lb.	3-lb.	4-lb.	Queens	Packages with Davis
1-24	$1.45	$3.75	$4.50	$5.45	$1.20	queens deduct
25-99	1.35	3.50	4.40	5.25	1.10	25c from
100-up	1.25	3.25	4.25	5.15	1.00	Starline prices

Extra pounds, $1.00 per lb. Shipping starts about April 10.

Reg. U.S. Pat. Off.

LITTLE'S APIARIES
Shelbyville, Tenn. P. O. Box 122

PACKAGE BEES **ITALIAN QUEENS**

	1-49	50-99	100-up
2 lb. with queen	$3.50	$3.25	$3.00
3 lb. with queen	4.50	4.25	4.00
4 lb. with queen	5.50	5.25	4.90
5 lb. with queen	6.50	6.25	5.80
Queens	1.15	1.10	1.00

Safe arrival and satisfaction guaranteed.
Queens sent airmail postpaid—clipped on request.

GEO. A. HUMMER & SONS
Prairie Point, Miss. Western Union, Macon, Miss.

1876 **1952**

Our 1952 crop of Michigan clover honey should be ready for the market in July. Dealer: if you want clover honey of the best quality, get on our mailing list, and we will keep you advised on crop conditions, and prices for the coming season. Address E. D. Townsend & Sons, Northstar, Michigan. The BEST known name in HONEY PRODUCTION.

Package Bees
and
Queens
Write for Prices.

JACKSON APIARIES
Box 58, Funston, Ga. U.S.A.

OLDEST BEE JOURNAL IN THE ENGLISH LANGUAGE

Keep up on markets, practices, scientific data, regulations, and plant possibilities.

1 year, $2.00, U. S. and Canada
Foreign postage, 50c a year extra

AMERICAN BEE JOURNAL
Hamilton, Illinois

If you are taking time to read, why not read the best? Condensed to save you time. Illustrated to give you pleasure.

Modern Beekeeping
The Picture Bee Magazine
Box 210 Paducah, Kentucky

Peace is for the strong . . .
Buy U. S. Defense Bonds regularly!

SELLING AT THE ROADSIDE MARKETS

(Continued from page 572)

It gets the honey direct to the consumer quickly before the honey has a chance to do much granulating. It avoids complex marketing problems. It increases consumption of honey through other channels because it is brought to the attention of so many people who travel along the highways. It enables the producer to dispose of his crop conveniently at a profit. Any food and especially honey, offered for sale in the country, makes an appeal to the customer because of its freshness and purity. Roadside honey selling is a cash business and helps to eliminate bookkeeping and collections.

To be successful in selling honey, one must really and truly believe in honey and be fairly saturated with the principles that govern success. Unless one eats honey, thinks honey, dreams honey, and sells honey with all his might and main it is better to look for an easier job.

ITALIAN QUEENS

Pure mating guaranteed
$1.00 each

W. E. PLANT

Hattiesburg, Mississippi

HOWARD WEAVER'S

Caucasian Queens at the following prices:

1 - 24	$1.10
25 - 49	1.00
50 - up	.90

No package bees.

Howard Weaver
Navasota, Texas

KOEHNEN'S
Package Bees and Queens
For Quality and Service
KOEHNEN'S APIARIES
GLENN, CALIFORNIA

HIGH QUALITY ITALIAN QUEENS

By Air Mail ..... 75c each
10 or more ..... 70c each

For prices on Package Bees please refer to May issue of Journal.

CARLUS T. HARPER, New Brockton, Ala.

REQUEEN NOW

As Soon As You Get That Honey Off — Requeen

It's Good Insurance For Wintering And Next Year's Crop

WE HAVE THE QUEENS
ITALIANS CAUCASIANS
ITALIAN HYBRIDS

Prices

1 - 24	$ .75 each
25 - 99	.70 each
100-499	.65 each
Tested Queens	1.50 each

Postpaid, Airmailed and/or Clipped—No Extra Cost

The Stover Apiaries

Mayhew, Miss.

Package Bees for 1952

Truck loads a specialty
Nuclei made to order
Italian Queens

Eugene Walker

Live Oak, Calif.

Selected Italian Queens 75c ea.
All queens shipped Air Mail and guaranteed to please.
Carniolans ..... $1.00 ea.
Caucasian queens . .90 ea.

Walter D. Leverette Apiaries

Box 364 Fort Pierce, Florida

KELLEY — "The Bee Man"

QUEENS

The package season is now over and we have a surplus of fine young Kelley Island Improved Hybrid queens, fresh daily from your Louisiana bee farm.

Each by prepaid air mail from Paducah 75c

Lots of 25 and more, 65c each.

Walter T. Kelley Co., Box 210, Paducah, Ky.

BETTER-BRED QUEENS **THREE-BANDED ITALIANS**

60c each Use them for replacing failing queens, also requeening for swarm control, etc. You can't buy any better queens at any price. **60c each**

CALVERT APIARIES **CALVERT, ALABAMA**

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